

FACT SHEET

U.S. Department of the Treasury
Bureau of Engraving and Printing
Western Currency Facility
Fort Worth, Texas

Background: The U.S. Department of the Treasury, Bureau of Engraving and Printing, owns and operates the Western Currency Facility in Fort Worth, Texas. The Western Currency Facility is subject to the Texas Administrative Code, which has been incorporated in the Texas Air Pollution Control Implementation Plan (the SIP), at 40 C.F.R. Part 52, Part SS. In addition to being subject to the SIP, the Western Currency Facility has three boilers which are subject to the Standards of Performance for New Stationary Sources (NSPS), 40 C.F.R. Part 60, Subpart Dc, and two hexavalent hard chromium tanks subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

EPA Region 6 conducted a multi-media inspection of the Western Currency Facility on June 9 and 10, 1998, to determine its compliance with the SIP, the NSPS and the NESHAP. Violations from the inspection include:

1. Failure to operate the thermal oxidizer at a minimum of 1400 degrees F.
2. Failure to produce a monthly report of VOC content of daily ink and cleanup solvent usage
3. Failure to store absorbent rags and other waste materials in sealed containers
4. Failure to use proper controls when operating a system utilizing a VOC
5. Failure to provide the annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fires and based on each individual fuel fired
6. Failure to provide daily records of each fuel combusted in the boilers
7. Failure to submit quarterly reports for boilers
8. Late submission of initial notification for chromium electroplating tanks.
9. Late demonstration of initial compliance of chromium electroplating tanks

Recommended

Action: Signature of this waiver request will allow DOJ sufficient time to review the issues and enable Region 6 to create an Administrative Penalty Order in time to meet the March 31, 1999 Second Quarter Commitment.

Enf. Atty: Amie Dutta Richardson (6EN-LA)
Enf. Officer: Toni Allen (6EN-AT)

ATTACHMENTS

- A. BEP Annual Waste Summary
- B. RCRA Checklists
- C. MSDSs for the Inks and the Solvents used at BEP
- D. Hazardous Waste Manifests
- E. BEP's List of Wastes and Codes
- F. BEP Contingency Plan



MATERIAL SAFETY DATA SHEET

DATE PRINTED: 01-06-1998

374034AF

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PRODUCT NAME: INTAGLIO, C/W BLACK INK, I-287
 PRODUCT CODE: 374034AF

HMIS CODES: H F R P
 2 1 0 B

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: SICPA Securink Corporation
 ADDRESS : 8000 RESEARCH WAY
 SPRINGFIELD, VA 22153

EMERGENCY PHONE : (703) 455-8050
 INFORMATION PHONE : (703) 455-8050

NAME OF PREPARER : TOM CLASSICK/bdr

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
POLYALKYLENE OXIDE POLYOL	25322-69-4	0.3 68 F	<5
OSHA PEL: Not Established			
ACGIH TLV: Not Established			
C.I. PIGMENT BLACK 7	1333-86-4	n/a n/a	<5
OSHA PEL as Carbon Black: 3.5 mg/m ³ TWA 8-hour			
ACGIH TLV as Carbon Black (1986): 3.5 mg/m ³ TWA 8-hour			

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: >300 deg F
 VAPOR DENSITY: HEAVIER THAN AIR
 SOLUBILITY IN WATER: SPARINGLY SOLUBLE
 APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR

SPECIFIC GRAVITY (H₂O=1): 1.54
 EVAPORATION RATE: SLOWER THAN ETHER

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: >200 deg F
 FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A
 EXTINGUISHING MEDIA: FOAM, CO₂, DRY CHEMICAL

METHOD USED: OC
 UPPER: N/A

SPECIAL FIREFIGHTING PROCEDURES

SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE KNOWN

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE
 CONDITIONS TO AVOID

MATERIAL SAFETY DATA SHEET
374034AF

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IGNITION SOURCES**INCOMPATIBILITY (MATERIALS TO AVOID)**

STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR**===== SECTION VI - HEALTH HAZARD DATA =====****INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.

THIS PRODUCT CONTAINS A HYDROCARBON COMPOUND. UNDER NORMAL INDUSTRIAL USE, GENERATION OF MINERAL OIL MISTS IS NOT ANTICIPATED. HOWEVER, IF OIL MISTS ARE GENERATED DUE TO THE MECHANICAL OPERATION OF MOVING PRESS PARTS OR OTHER SOURCES, INHALATION OF MINERAL OIL MISTS MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA. THE OSHA PEL AND THE ACGIH TLV FOR "OIL MIST, MINERAL" IS 5 mg/m³ TWA 8-HOUR.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

SKIN - MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.

EYE - MAY CAUSE BURNING AND IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED. POLYALKYLENE OXIDE POLYOL IS MODERATELY TOXIC IF INGESTED.

ACUTE HEALTH HAZARDS

INHALATION - DIZZINESS, DROWSINESS, OR NAUSEA.

EYE CONTACT - THIS MATERIAL MAY CAUSE SLIGHT TO MODERATE IRRITATION OF THE EYE. TESTS OF SIMILAR PRODUCTS HAVE CAUSED EYE IRRITATION IN LABORATORY ANIMALS.

SKIN CONTACT - MAY CAUSE SLIGHT IRRITATION. PROLONGED CONTACT MAY LEAD TO DERMATITIS.

CHRONIC HEALTH HAZARDS

NONE KNOWN.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: Yes OSHA REGULATED: No
THIS PRODUCT CONTAINS CARBON BLACK. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS IDENTIFIED CARBON BLACK AS "POSSIBLY CARCINOGENIC TO HUMANS" (GROUP 2B). IARC MONOGRAPH: VOLUME 65; 1996. REPEATED INHALATION OF HIGH CONCENTRATIONS OF CARBON BLACK HAVE BEEN LINKED TO TUMORS AND OTHER LUNG DISORDERS IN EXPERIMENTAL ANIMALS. NO SUCH EFFECTS HAVE BEEN ESTABLISHED IN HUMANS. DUE TO THE NATURE OF THIS PRODUCT, INHALATION OF SIGNIFICANT QUANTITIES OF CARBON BLACK IS UNLIKELY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.

EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.

SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

INGESTION - SEEK MEDICAL ATTENTION.

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===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND -USE =====**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.
INK SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.
DO NOT FLAME-CUT OR WELD DRUMS.
DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

===== SECTION VIII - CONTROL MEASURES =====**RESPIRATORY PROTECTION**

NOT NECESSARY IN NORMAL HANDLING. NIOSH APPROVED RESPIRATOR RECOMMENDED IF EXPOSURE LIMITS ARE EXCEEDED.

VENTILATION-

RECOMMEND LOCAL EXHAUST.

PROTECTIVE GLOVES

CHEMICAL RESISTANT GLOVES (e.g., NITRILE RUBBER) RECOMMENDED.

EYE PROTECTION

GOGGLES RECOMMENDED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

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 PRODUCT CODE: 354034AF

HMS CODES: H F R P
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NAME OF PREPARER : TOM CLASSICK/bdr

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REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
POLYALKYLENE OXIDE POLYOL			
OSHA PEL: Not Established	25322-69-4	0.3	68 F
ACGIH TLV: Not Established			<5
C.I. PIGMENT BLACK 7			
OSHA PEL as Carbon Black: 3.5 mg/m ³ TWA 8-hour	1333-86-4	n/a	n/a
ACGIH TLV as Carbon Black (1986): 3.5 mg/m ³ TWA 8-hour			<5

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: >300 deg F
 VAPOR DENSITY: HEAVIER THAN AIR
 SOLUBILITY IN WATER: SPARINGLY SOLUBLE
 APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR

SPECIFIC GRAVITY (H₂O=1): 1.43
 EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200 deg F
 FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A
 EXTINGUISHING MEDIA: FOAM, CO₂, DRY CHEMICAL

METHOD USED: OC
 UPPER: N/A

SPECIAL FIREFIGHTING PROCEDURES

SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE KNOWN

SECTION V - REACTIVITY DATA

STABILITY: STABLE
 CONDITIONS TO AVOID

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IGNITION SOURCES**INCOMPATIBILITY (MATERIALS TO AVOID)**
STRONG OXIDIZING AGENTS**HAZARDOUS DECOMPOSITION OR BYPRODUCTS**
WILL NOT OCCUR UNDER NORMAL CONDITIONS.**HAZARDOUS POLYMERIZATION: WILL NOT OCCUR****SECTION VI - HEALTH HAZARD DATA****INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.

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SKIN - MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.

EYE - MAY CAUSE BURNING AND IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED. POLYALKYLENE OXIDE POLYOL IS MODERATELY TOXIC IF INGESTED.

ACUTE HEALTH HAZARDS

INHALATION - DIZZINESS, DROWSINESS, OR NAUSEA.

EYE CONTACT - THIS MATERIAL MAY CAUSE SLIGHT TO MODERATE IRRITATION OF THE EYE. TESTS OF SIMILAR PRODUCTS HAVE CAUSED EYE IRRITATION IN LABORATORY ANIMALS.

SKIN CONTACT - MAY CAUSE SLIGHT IRRITATION. PROLONGED CONTACT MAY LEAD TO DERMATITIS.

CHRONIC HEALTH HAZARDS

NONE KNOWN.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: Yes OSHA REGULATED: No
THIS PRODUCT CONTAINS CARBON BLACK. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS IDENTIFIED CARBON BLACK AS "POSSIBLY CARCINOGENIC TO HUMANS" (GROUP 2B). IARC MONOGRAPH: VOLUME 63; 1996. REPEATED INHALATION OF HIGH CONCENTRATIONS OF CARBON BLACK HAVE BEEN LINKED TO TUMORS AND OTHER LUNG DISORDERS IN EXPERIMENTAL ANIMALS. NO SUCH EFFECTS HAVE BEEN ESTABLISHED IN HUMANS. DUE TO THE NATURE OF THIS PRODUCT, INHALATION OF SIGNIFICANT QUANTITIES OF CARBON BLACK IS UNLIKELY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.

EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.

SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

INGESTION - SEEK MEDICAL ATTENTION.

MATERIAL SAFETY DATA SHEET
354034AF

DATE PRINTED: 01-06-1998

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===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.
INK SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.
DO NOT FLAME-CUT OR WELD DRUMS.
DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

NOT NECESSARY IN NORMAL HANDLING. NIOSH APPROVED RESPIRATOR RECOMMENDED IF EXPOSURE LIMITS ARE EXCEEDED.

VENTILATION

RECOMMEND LOCAL EXHAUST.

PROTECTIVE GLOVES

CHEMICAL RESISTANT GLOVES (e.g., NITRILE RUBBER) RECOMMENDED.

EYE PROTECTION

GOGGLES RECOMMENDED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE, OBTAINED FROM SOURCES BELIEVED BY SICPA TO BE ACCURATE. NO GUARANTEE IS IMPLIED OR EXPRESSED REGARDING THE ACCURACY OF THIS INFORMATION, NOR DOES SICPA ASSUME ANY LEGAL RESPONSIBILITY FOR RELIANCE ON OR USE OF THIS INFORMATION. USERS ARE RESPONSIBLE FOR CONDUCTING THEIR OWN TESTS.



MATERIAL SAFETY DATA SHEET

Plate Print
100PRODUCT NAME: I-286 INTAG. CYLINDER-WIPE
PRODUCT CODE: 354033AFHMIS CODES: H F R P
2 1 0 B

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: SICPA Securink Corporation

ADDRESS: 8000 RESEARCH WAY, SPRINGFIELD, VA 22153

EMERGENCY PHONE: (703) 455-8050

DATE REVISED : 01-05-94

INFORMATION PHONE: (703) 455-8050

NAME OF PREPARER : TOM CLASSICK/bdr

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

HAZARDOUS COMPONENTS

OCCUPATIONAL EXPOSURE LIMITS
GAS NUMBER OSHA PEL ACGIH TLV OTHERVAPOR PRESSURE WEIGHT
mm Hg @ TEMP PERCENT

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

THIS PRODUCT IS A "HAZARDOUS CHEMICAL" AS DEFINED IN 29 CFR 1910.1200. HAZARD: EYE IRRITANT. SEE SECTION VI.

APPROVED FOR USE BY THE
SAFETY & HEALTH OFFICE

TAGS #: 100

DATE REVIEWED: 7-26-96

REVIEWED BY:

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING POINT: >300 deg F

SPECIFIC GRAVITY (H2O=1): 1.4

VAPOR DENSITY: HEAVIER THAN AIR

EVAPORATION RATE: SLOWER THAN ETHER

SOLUBILITY IN WATER: SPARINGLY SOLUBLE

APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: >200 F

METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME-

LOWER: N/A

UPPER: N/A

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

USUAL FIRE AND EXPLOSION HAZARDS

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID

IGNITION SOURCES

INCOMPATIBILITY (MATERIALS TO AVOID)
STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SKIN - MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.

EYE - THIS PRODUCT IS AN EYE IRRITANT, BASED ON ANIMAL TESTING. CONTACT WITH EYES MAY CAUSE IRRITATION AND BURNING.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MAY PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED.

HEALTH HAZARDS (ACUTE AND CHRONIC)

ACUTE: INHALATION - DIZZINESS, DROWSINESS, OR NAUSEA.

EYE CONTACT - MAY CAUSE BURNING AND IRRITATION.

SKIN CONTACT - MAY CAUSE IRRITATION OR DERMATITIS.

CHRONIC: NONE KNOWN.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.

EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.

SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

INGESTION - SEEK MEDICAL ATTENTION.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.
SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.
DO NOT FLAME-CUT OR WELD DRUMS.
DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

NOT NECESSARY IN NORMAL HANDLING.

VENTILATION

LOCAL EXHAUST.

PROTECTIVE GLOVES

RUBBER GLOVES RECOMMENDED.

EYE PROTECTION

WEAR GOGGLES OR EQUIVALENT EYE PROTECTION WHEN CONTACT WITH EYES IS POSSIBLE.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

DISCLAIMER

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MATERIAL SAFETY DATA SHEET

BEP, WCF
MSDS # 337

PRODUCT NAME: I-286 INT CW CURRENCY GREEN
PRODUCT CODE: 354033A

HMIS CODES: H F R P
2 1 0 B

===== SECTION I - MANUFACTURER IDENTIFICATION =====

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ADDRESS: 8000 RESEARCH WAY, SPRINGFIELD, VA 22153
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DATE REVISED : 01-05-94
INFORMATION PHONE: (703) 455-8050
NAME OF PREPARER : TOM CLASSICK/bdr

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

HAZARDOUS COMPONENTS	OCCUPATIONAL EXPOSURE LIMITS				VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
	CAS NUMBER	OSHA PEL	ACGIH TLV	OTHER		

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

THIS PRODUCT IS A "HAZARDOUS CHEMICAL" AS DEFINED IN 29 CFR 1910.1200. HAZARD: EYE IRRITANT. SEE SECTION VI.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING POINT: >300 deg F
VAPOR DENSITY: HEAVIER THAN AIR
SOLUBILITY IN WATER: SPARINGLY SOLUBLE
APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR
SPECIFIC GRAVITY (H2O=1): 1.4
EVAPORATION RATE: SLOWER THAN ETHER

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: >200 F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A UPPER: N/A
EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL
METHOD USED: TCC

SPECIAL FIREFIGHTING PROCEDURES
SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE
CONDITIONS TO AVOID
IGNITION SOURCES

INCOMPATIBILITY (MATERIALS TO AVOID)
STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SKIN - MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.
EYE - THIS PRODUCT IS AN EYE IRRITANT, BASED ON ANIMAL TESTING. CONTACT WITH EYES MAY CAUSE IRRITATION AND BURNING.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED.

HEALTH HAZARDS (ACUTE AND CHRONIC)

ACUTE: INHALATION - DIZZINESS, DROWSINESS, OR NAUSEA.
EYE CONTACT - MAY CAUSE BURNING AND IRRITATION.
SKIN CONTACT - MAY CAUSE IRRITATION OR DERMATITIS.

CHRONIC: NONE KNOWN.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.
EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.
SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.
INGESTION - SEEK MEDICAL ATTENTION.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.
SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.
DO NOT FLAME-CUT OR WELD DRUMS.
DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

NOT NECESSARY IN NORMAL HANDLING.

VENTILATION

LOCAL EXHAUST.

PROTECTIVE GLOVES

RUBBER GLOVES RECOMMENDED.

EYE PROTECTION

WEAR GOGGLES OR EQUIVALENT EYE PROTECTION WHEN CONTACT WITH EYES IS POSSIBLE.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

DISCLAIMER

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE, OBTAINED FROM SOURCES BELIEVED BY SICPA TO BE ACCURATE. NO GUARANTEE IS IMPLIED OR EXPRESSED REGARDING THE ACCURACY OF THIS INFORMATION, NOR DOES SICPA ASSUME ANY LEGAL RESPONSIBILITY FOR RELIANCE ON OR USE OF THIS INFORMATION. USERS ARE RESPONSIBLE FOR CONDUCTING THEIR OWN TESTS.

354033A

I-286 INT CW CURRENCY GREEN

TO: BUREAU OF ENGR. & PRINTING
3100 GUNSTON COUNTRY ROAD
LINTON, VA 22079

FROM: SICPA SECUREINK CORP.
8000 RESEARCH WAY
SPRINGFIELD, VA 22153

LOT #

P.O. # TEST

ORDER # LABEL

DATE:

TARE WT: 40
NET WT: 600
GROSS WT: 640 lbs.

HEALTH..... 2

FLAMMABILITY.. 1

REACTIVITY.... 0

PERS. PROT'N.. B

EYE IRRITANT; AVOID CONTACT WITH EYES.
AVOID BREATHING MIST OR VAPORS.
SEE MSDS FOR ADDITIONAL INFORMATION.

U.S. PATENT NO. 4,966,628.

DATE PRINTED: 04-10-1998

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PRODUCT NAME: INTAGLIO, C/W GREEN INK, INV IR
PRODUCT CODE: 354035IR

HMIS CODES: H F R P
2 1 0 B

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: SICPA Securink Corporation
ADDRESS : 8000 RESEARCH WAY
SPRINGFIELD, VA 22153

EMERGENCY PHONE : (703) 455-8050
INFORMATION PHONE : (703) 455-8050

NAME OF PREPARER : TOM CLASSICK/bdr

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
POLYALKYLENE OXIDE POLYOL	25322-69-4	0.3 68 F	<5
OSHA PEL: Not Established			
ACGIH TLV: Not Established			

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: >300 deg F
VAPOR DENSITY: HEAVIER THAN AIR
SOLUBILITY IN WATER: SPARINGLY SOLUBLE
APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR

SPECIFIC GRAVITY (H2O=1): 1.38
EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200 deg F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A
EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

METHOD USED: OC
UPPER: N/A

SPECIAL FIREFIGHTING PROCEDURES

SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE KNOWN

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID
IGNITION SOURCES

INCOMPATIBILITY (MATERIALS TO AVOID)

MATERIAL SAFETY DATA SHEET

DATE PRINTED: 04-10-1998

35403SIR

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STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.
THIS PRODUCT CONTAINS A HYDROCARBON COMPOUND. UNDER NORMAL INDUSTRIAL USE, GENERATION OF MINERAL OIL MISTS IS NOT ANTICIPATED.
HOWEVER, IF OIL MISTS ARE GENERATED DUE TO THE MECHANICAL OPERATION OF MOVING PRESS PARTS OR OTHER SOURCES, INHALATION OF MINERAL OIL MISTS MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA. THE OSHA PEL AND THE ACGIH TLV FOR "OIL MIST, MINERAL" IS 5 mg/m³ TWA 8-HOUR.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

SKIN - MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.
EYE - MAY CAUSE BURNING AND IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED.
POLYALKYLENE OXIDE POLYOL IS MODERATELY TOXIC IF INGESTED.

ACUTE HEALTH HAZARDS

INHALATION - DIZZINESS, DROWSINESS, OR NAUSEA.
EYE CONTACT - THIS MATERIAL MAY CAUSE SLIGHT TO MODERATE IRRITATION OF THE EYE. TESTS OF SIMILAR PRODUCTS HAVE CAUSED EYE IRRITATION IN LABORATORY ANIMALS.
SKIN CONTACT - MAY CAUSE SLIGHT IRRITATION. PROLONGED CONTACT MAY LEAD TO DERMATITIS.

CHRONIC HEALTH HAZARDS

NONE KNOWN.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.
EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.
SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.
INGESTION - SEEK MEDICAL ATTENTION.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.
INK SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

MATERIAL SAFETY DATA SHEET
354035IR

DATE PRINTED: 04-10-1998

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WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.

DO NOT FLAME-CUT OR WELD DRUMS.

DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

NOT NECESSARY IN NORMAL HANDLING. NIOSH APPROVED RESPIRATOR RECOMMENDED IF EXPOSURE LIMITS ARE EXCEEDED.

VENTILATION

RECOMMEND LOCAL EXHAUST.

PROTECTIVE GLOVES

CHEMICAL RESISTANT GLOVES (e.g., NITRILE RUBBER) RECOMMENDED.

EYE PROTECTION

GOGGLES RECOMMENDED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE, OBTAINED FROM SOURCES BELIEVED BY SICPA TO BE ACCURATE. NO GUARANTEE IS IMPLIED OR EXPRESSED REGARDING THE ACCURACY OF THIS INFORMATION, NOR DOES SICPA ASSUME ANY LEGAL RESPONSIBILITY FOR RELIANCE ON OR USE OF THIS INFORMATION. USERS ARE RESPONSIBLE FOR CONDUCTING THEIR OWN TESTS.

DATE PRINTED: 04-23-1998

Page: 1

PRODUCT NAME: I-1164 INT.LIB.GREEN/BLK OVITM
PRODUCT CODE: 358063LGBF

HMIS CODES: H F R P
2 2 0 B

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: SICPA Securink Corporation
ADDRESS : 8000 RESEARCH WAY
SPRINGFIELD, VA 22153

EMERGENCY PHONE : (703) 455-8050
INFORMATION PHONE : (703) 455-8050

NAME OF PREPARER : TOM CLASSICK/bdr

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP		WEIGHT PERCENT

* INORGANIC COMPOUND				
OSHA PEL: 2.5 mg/m3, ACGIH TLV: 2.5 mg/m3 LD50: No Data, LC50: No Data	PROPRIETARY	0	0	<25
* SURFACTANT				
OSHA PEL: Not Established ACGIH TLV: Not Established	PROPRIETARY	n/a	n/a	<5
* DIETHYLENE GLYCOL MONOETHYL ETHER				
OSHA PEL: Not Established ACGIH TLV: Not Established Supplier Recommended Exposure Limit: 30 ppm LD50: 10,502 mg/kg Oral - Rat; LC50: >5,000 mg/l/24-hour - Goldfish	111-90-0	.1	68 F	3
PETROLEUM HYDROCARBON				
OSHA PEL as Oil Mist, Mineral: 5 mg/m3 TWA 8-hour ACGIH TLV as Oil Mist, Mineral: 5 mg/m3 TWA 8-hour	PROPRIETARY	1.5	20 C	<5
* MANGANESE OCTOATE				
OSHA PEL as Manganese Compound: 5 mg/m3 TWA 8-hour Ceiling ACGIH TLV as Manganese Compound: 5 mg/m3 TWA 8-hour	MIXTURE	n/a	n/a	1
MINERAL SPIRITS				
OSHA PEL as Stoddard Solvent: 500 ppm (2900 mg/m3) TWA 8-hour OSHA PEL, vacated 58 FR 35338, 6/93: 100 ppm (525 mg/m3) 8-hour ACGIH TLV as Stoddard Solvent: 100 ppm (525 mg/m3) TWA 8-hour	PROPRIETARY	1.5	20 C	<5
C.I. PIGMENT BLACK 7				
OSHA PEL as Carbon Black: 3.5 mg/m3 TWA 8-hour ACGIH TLV as Carbon Black (1986): 3.5 mg/m3 TWA 8-hour	1333-86-4	n/a	n/a	<5

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of title III and of 40 CFR 372.
Identity of ingredient is being withheld as a trade secret.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: >300 deg F
VAPOR DENSITY: HEAVIER THAN AIR
SOLUBILITY IN WATER: SPARINGLY SOLUBLE
APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR

SPECIFIC GRAVITY (H₂O=1): 1.19
EVAPORATION RATE: SLOWER THAN ETHER

MATERIAL SAFETY DATA SHEET
358063LGBF

DATE PRINTED: 04-23-1998

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===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: >141 deg F

METHOD USED: Setaflash

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.2

UPPER: 23.5

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE KNOWN

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

CONDITIONS TO AVOID

IGNITION SOURCES

INCOMPATIBILITY (MATERIALS TO AVOID)

STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

SKIN - MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.

EYE - MAY CAUSE BURNING AND IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED.

INGESTION OF LARGE QUANTITIES OF SOME INORGANIC INGREDIENTS CONTAINED IN THIS PRODUCT MAY CAUSE NAUSEA, VOMITING, OR ABDOMINAL PAIN. INGESTION OF SIGNIFICANT QUANTITIES OF THIS MATERIAL UNDER NORMAL WORKPLACE CONDITIONS IS CONSIDERED UNLIKELY.

ACUTE HEALTH HAZARDS

INHALATION - DIZZINESS, DROWSINESS, OR NAUSEA.

EYE CONTACT - THIS MATERIAL MAY CAUSE SLIGHT TO MODERATE IRRITATION OF THE EYE. TESTS OF SIMILAR PRODUCTS HAVE CAUSED EYE IRRITATION IN LABORATORY ANIMALS.

SKIN CONTACT - MAY CAUSE SLIGHT IRRITATION. PROLONGED CONTACT MAY LEAD TO DERMATITIS.

CHRONIC HEALTH HAZARDS

REPEATED INGESTION OF LARGE QUANTITIES OF SOME GLYCOL ETHERS MAY CAUSE KIDNEY, LIVER, OR REPRODUCTIVE EFFECTS, BASED ON ANIMAL DATA.

MATERIAL SAFETY DATA SHEET
358063LGBF

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EXCESSIVE INHALATION AND/OR INGESTION OF SOME MANGANESE COMPOUNDS HAS BEEN REPORTED TO CAUSE NERVOUS SYSTEM AND RESPIRATORY DISORDERS. INGESTION OF SIGNIFICANT QUANTITIES OF THE INORGANICS CONTAINED IN THIS PRODUCT COULD CAUSE WEIGHT LOSS, ANOREXIA, BONE CHANGES AND DENTAL DEFECTS. INHALATION OR INGESTION OF SIGNIFICANT QUANTITIES OF THIS MATERIAL UNDER NORMAL WORKPLACE CONDITIONS IS CONSIDERED UNLIKELY.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: Yes OSHA REGULATED: No
THIS PRODUCT CONTAINS CARBON BLACK. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS IDENTIFIED CARBON BLACK AS "POSSIBLY CARCINOGENIC TO HUMANS" (GROUP 2B). IARC MONOGRAPH: VOLUME 65; 1996. REPEATED INHALATION OF HIGH CONCENTRATIONS OF CARBON BLACK HAVE BEEN LINKED TO TUMORS AND OTHER LUNG DISORDERS IN EXPERIMENTAL ANIMALS. NO SUCH EFFECTS HAVE BEEN ESTABLISHED IN HUMANS. DUE TO THE NATURE OF THIS PRODUCT, INHALATION OF SIGNIFICANT QUANTITIES OF CARBON BLACK IS UNLIKELY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

DERMATITIS.

LIVER AND KIDNEY DISORDERS.

MANGANESE COMPOUNDS MAY AGGRAVATE ACUTE AND CHRONIC RESPIRATORY DISORDERS, LIVER AND KIDNEY DISEASES, AND NERVOUS SYSTEM DISORDERS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.

EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.

SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

INGESTION - SEEK MEDICAL ATTENTION.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.

INK SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.

DO NOT FLAME-CUT OR WELD DRUMS.

DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

SECTION VIII - CONTROL MEASURES**RESPIRATORY PROTECTION**

NOT NECESSARY IN NORMAL HANDLING. NIOSH APPROVED RESPIRATOR RECOMMENDED IF EXPOSURE LIMITS ARE EXCEEDED.

VENTILATION

RECOMMEND LOCAL EXHAUST.

PROTECTIVE GLOVES

CHEMICAL RESISTANT GLOVES (e.g., NITRILE RUBBER) RECOMMENDED.

EYE PROTECTION

GOGGLES RECOMMENDED.

MATERIAL SAFETY DATA SHEET
358063LGBF

DATE PRINTED: 04-23-1998

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OTHER PROTECTIVE CLOTHING OR EQUIPMENT

NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE, OBTAINED FROM SOURCES BELIEVED BY SICPA TO BE ACCURATE. NO GUARANTEE IS IMPLIED OR EXPRESSED REGARDING THE ACCURACY OF THIS INFORMATION, NOR DOES SICPA ASSUME ANY LEGAL RESPONSIBILITY FOR RELIANCE ON OR USE OF THIS INFORMATION. USERS ARE RESPONSIBLE FOR CONDUCTING THEIR OWN TESTS.

SICPA**MATERIAL SAFETY DATA SHEET**
251040F

DATE PRINTED: 01-13-1998

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PRODUCT NAME: I-347 TYPOGRAPHIC COPE GREEN
PRODUCT CODE: 251040FHMIS CODES: H F R P
1 1 0 B

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: SICPA Securink Corporation
ADDRESS : 8000 RESEARCH WAY
SPRINGFIELD, VA 22153

EMERGENCY PHONE : (703) 455-8050

INFORMATION PHONE : (703) 455-8050

NAME OF PREPARER : TOM CLASSICK/bdr

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS

CAS NUMBER

VAPOR PRESSURE
mm Hg @ TEMPWEIGHT
PERCENT

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

OILING RANGE: >300 deg F
VAPOR DENSITY: HEAVIER THAN AIR
SOLUBILITY IN WATER: SPARINGLY SOLUBLE
APPEARANCE AND ODOR: VISCOUS PASTE, VERY MILD ODOR
SPECIFIC GRAVITY (H2O=1): 1.31
EVAPORATION RATE: SLOWER THAN ETHER

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: >200 deg F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A
EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL
METHOD USED: CC
UPPER: N/A

SPECIAL FIREFIGHTING PROCEDURES

SELF CONTAINED BREATHING APPARATUS IS RECOMMENDED FOR FIRE FIGHTERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE KNOWN

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE
CONDITIONS TO AVOID
IGNITION SOURCESINCOMPATIBILITY (MATERIALS TO AVOID)
STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

MATERIAL SAFETY DATA SHEET
251040F

DATE PRINTED: 01-13-1998

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WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

THIS PRODUCT CONTAINS A HYDROCARBON COMPOUND. UNDER NORMAL INDUSTRIAL USE, GENERATION OF MINERAL OIL MISTS IS NOT ANTICIPATED. HOWEVER, IF OIL MISTS ARE GENERATED DUE TO THE MECHANICAL OPERATION OF MOVING PRESS PARTS OR OTHER SOURCES, INHALATION OF MINERAL OIL MISTS MAY CAUSE RESPIRATORY IRRITATION, DIZZINESS, DROWSINESS, HEADACHE, OR NAUSEA.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

SKIN - THIS MATERIAL IS CONSIDERED ESSENTIALLY NONIRRITATING. HOWEVER, FREQUENT OR PROLONGED SKIN CONTACT MAY CAUSE REDNESS, RASH, OR DERMATITIS IN SOME HYPERSENSITIVE INDIVIDUALS.
EYE - THIS MATERIAL IS EXPECTED TO BE MINIMALLY IRRITATING. HOWEVER, TESTING OF SIMILAR PRODUCTS HAS BEEN SHOWN TO CAUSE EYE IRRITATION WHEN MATERIAL IS IN CONTACT WITH THE EYE.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NONE KNOWN.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MAY PRODUCE SIGNS OF INTOXICATION SUCH AS DIZZINESS, HEADACHE, DROWSINESS, OR NAUSEA DEPENDING ON AMOUNT INGESTED.

ACUTE HEALTH HAZARDS

EYE CONTACT - THIS MATERIAL IS EXPECTED TO BE MINIMALLY IRRITATING. HOWEVER, SIMILAR PRODUCTS HAVE CAUSED EYE IRRITATION IN LABORATORY ANIMALS.
SKIN CONTACT - NONE EXPECTED. HOWEVER, PROLONGED CONTACT MAY LEAD TO IRRITATION OR DERMATITIS.
INHALATION - NONE EXPECTED. HOWEVER, HIGH CONCENTRATIONS OF MISTS OR VAPORS MAY CAUSE DIZZINESS, DROWSINESS, OR NAUSEA. THE OSHA PEL AND THE ACGIH TLV FOR "OIL MIST, MINERAL" IS 5 mg/m³ TWA 8-HOUR.

CHRONIC HEALTH HAZARDS

NONE KNOWN.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
DERMATITIS.**EMERGENCY AND FIRST AID PROCEDURES**

INHALATION OVEREXPOSURE - REMOVE TO FRESH AIR.
EYE CONTACT - FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 min. SEEK MEDICAL ATTENTION.
SKIN CONTACT - WASH THOROUGHLY. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.
INGESTION - SEEK MEDICAL ATTENTION.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

PROVIDE GOOD VENTILATION, SHOVEL AND SWEEP UP, WASH AREA THOROUGHLY.
INK SOLVENT OR MINERAL SPIRITS MAY FACILITATE CLEAN-UP.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND LAWS.

MATERIAL SAFETY DATA SHEET
251040F

DATE PRINTED: 01-13-1998

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE IN CLOSED CONTAINERS IN A COOL, WELL VENTILATED AREA.

OTHER PRECAUTIONS

KEEP CONTAINER CLOSED AND AWAY FROM OPEN FLAME.

DO NOT FLAME-CUT OR WELD DRUMS.

DO NOT RE-USE DRUMS FOR OTHER MATERIALS.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

NOT NECESSARY IN NORMAL HANDLING.

VENTILATION

RECOMMEND LOCAL EXHAUST.

PROTECTIVE GLOVES

CHEMICAL RESISTANT GLOVES (e.g., NITRILE RUBBER) RECOMMENDED.

EYE PROTECTION

GOGGLES RECOMMENDED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

NORMAL WORK CLOTHES TO PREVENT CONTACT WITH MATERIALS.

WORK/HYGIENIC PRACTICES

EYE WASH IN THE WORK PLACE IS RECOMMENDED.

===== SECTION IX - DISCLAIMER =====

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE, OBTAINED FROM SOURCES BELIEVED BY SICPA TO BE ACCURATE. NO GUARANTEE IS IMPLIED OR EXPRESSED REGARDING THE ACCURACY OF THIS INFORMATION, NOR DOES SICPA ASSUME ANY LEGAL RESPONSIBILITY FOR RELIANCE ON OR USE OF THIS INFORMATION. USERS ARE RESPONSIBLE FOR CONDUCTING THEIR OWN TESTS.

MATERIAL SAFETY DATA SHEET

Bureau of Engraving and Printing

IDENTITY INK FORMULA BK-6002-N, Black COPE Ink

Section I Manufactured by: Bureau of Engraving & Printing
14th & C Sts, S.W.
Washington, D.C. 20228
Prepared by: Paul T. Chien, Ph.D., CIH
(202)447-1422 Date: 1/91

Section II - Hazardous Ingredients/Identity Information

Blanc Fixe	17.6%
Alkyd Resin Varnish	17.1%
Carbon Black	15.9%
Iron Blue, Green tone	15.9%
#5 Pale Varnish	14.6%
Lead Manganese Drier*	7.0%
Cobalt Resinate/Drier	5.7%
Aluminum Hydrate	5.4%

APPROVED FOR USE BY THE
SAFETY & HEALTH OFFICE

MSDS #: 076

DATE REVIEWED: _____

REVIEWED BY: _____

*Contains 12% lead tellate, an inorganic lead compound.

Estimated Threshold Limit Value -- 10mg/m³

Section III - Physical/Chemical Characteristics

Boiling Pt.: N/A	Sp. Grav.: >1.0
Vap. Pres.: <1.0	Melt. Pt.: N/A
Vap. Den.: >1.0	
Evap. Rate: <1.0 (Butyl acetate = 1)	
Solubility in water: NO	
Appearance and Odor: Black paste, hydrocarbon odor	

Section IV - Fire and Explosion Hazard Data

Flash Pt.: >104 F Flam. Limits: N/A
Extinguishing Media: Foam, CO₂, dry chemical
Special Fire Fighting Procedure: Use self-contained
breathing apparatus to protect against harmful and/or
irritating fumes.
Unusual Fire & Explosion Hazards: Protect drums from
pressure build-up and possible rupture if exposed to
extreme heat.

Section V - Reactivity Data

Stability: Stable.
Conditions to Avoid: Extreme heat, high pressure
Incompatibility (Materials to Avoid): Strong oxidizers and
reducing chemicals.
Hazardous Decomposition Byproducts: CO₂, CO
Hazardous Polymerization: N/A

Section VI - Health Hazard Data

Routes of Entry: Inhalation? Yes. Skin? Yes.
Ingestion? Yes.

Health Hazards (Acute and Chronic): Skin and eye contact may cause irritation and sensitization. Excessive inhalation of vapors or mists may cause local irritation, pneumonia, central nervous system depression.

Carcinogenicity: NTP? No. IARC Monographs? No.
OSHA Regulated? No.

Signs & Symptoms of Exposure: Skin/eye irritation, headache, nausea, pneumonia, central nervous system depression.

Medical Conditions Generally Aggravated by Exposure: Skin diseases.

Emergency & First Aid Procedures:

Eyes: Flush with water for 15 minutes; if irritation develops, get medical attention.

Skin: Wash with soap and water; if irritation develops, get medical attention.

Inhalation: Remove to fresh air; If breathing is difficult get medical attention.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Collect into suitable container for appropriate disposal. Use gloves and apron to avoid skin contact.

Waste Disposal Method: Landfill or otherwise dispose of in accordance with applicable Federal and Local environmental control regulations.

Precautions to Be Taken in Handling and Storing:

Use gloves and apron to avoid skin contact. Keep container covered when not in use. Avoid high temperature and direct sunlight.

Other Precautions: None.

Section VIII - Control Measures

Respiratory Protection (Specify Type): Avoid prolonged inhalation of vapors by using approved respirators that are equipped with organic-vapor cartridges.

Ventilation: Use adequate ventilation to avoid build-up of vapors/mists.

Protective Gloves: Any kind of synthetic disposable gloves.

Eye protection: Goggles, full-face shields, masks.

Other Protective Clothing or Equipment: Disposable lab coats, aprons, long sleeves, coveralls.

Work/Hygienic Practices: Avoid skin/eye contact and contamination of clothing. Wash hands thoroughly with soap and water before leaving work area. Launder contaminated clothing before reuse. No eating, drinking or smoking in work area.



APPROVED FOR USE BY THE
SAFETY & HEALTH OFFICE

MSDS #:

720

DATE REVIEWED:

REVIEWED BY:

SAFETY DATA SHEET

97368 (4-85)

MSDS NUMBER

7,653-1 T

PAGE

24 HOUR EMERGENCY ASSISTANCE

SHELL: 713-473-9461 CHEMTREC: 800-424-9300

GENERAL MSDS ASSISTANCE

SHELL: 713-241-4819

ACUTE HEALTH
+

2

FIRE
2

REACTIVITY
0

HAZARD RATING

LEAST - 0

SLIGHT - 1

MODERATE - 2

HIGH - 3

EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION
... AND
PASS IT ON

(PRODUCT LIABILITY LAW
REQUIRES IT)

SECTION I

NAME

PRODUCT SHELL SOL 142 HT

CHEMICAL NAME SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPHATIC

CHEMICAL FAMILY HYDROCARBON SOLVENT

SHELL CODE 84044

SECTION II-A

PRODUCT/INGREDIENT

NO.

COMPOSITION

CAS NUMBER

PERCENT

P SHELL SOL 142 HT*

64742-88-7

100

*A COMPLEX COMBINATION OF PREDOMINANTLY C9-C12 HYDROCARBONS; EXACT COMPOSITION WILL VARY.

HMIS HAZARD RATING: HEALTH 1 FIRE 2 REACTIVITY 0

SECTION II-B

ACUTE TOXICITY DATA

NO.

ACUTE ORAL LD50

ACUTE DERMAL LD50

ACUTE INHALATION LC50

** >25 ML/KG (RAT)

>4 ML/KG (RABBIT)

>700 PPM/4H (RAT)

**BASED ON EITHER PRODUCT OR ESSENTIALLY SIMILAR PRODUCT TESTING.

SECTION III

HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT

LIQUID IS PRACTICALLY NONIRRITATING TO THE EYES.

SKIN CONTACT

LIQUID IS SLIGHTLY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS.

INHALATION

VAPORS MAY CAUSE IRRITATION TO NOSE, THROAT, AND RESPIRATORY TRACT. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION.

INGESTION

INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

PRODUCT NAME: SHELL SOL 142 HT

MSDS 7,653-1 T
PAGE 2

SIGNS AND SYMPTOMS

IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS DEPRESSION MAY BE EVIDENCED BY GIDDINESS, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. ASPIRATION MONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR.

AGGRAVATED MEDICAL CONDITIONS

PREEXISTING EYE, SKIN, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV

OCCUPATIONAL EXPOSURE LIMITS

NO.	PEL/TWA	OSHA PEL/CEILING	TLV/TWA	ACGIH TLV/STEL	OTHER
P*	100 PPM		100 PPM		

*RECOMMEND THAT LIMITS FOR STODDARD SOLVENT BE USED AS A GUIDE.

SECTION V

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING/SHOES. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL VENTILATION IF NOT BREATHING.

INGESTION

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.*

NOTE TO PHYSICIAN

*IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VI

SUPPLEMENTAL HEALTH INFORMATION

MALE RATS EXPOSED FOR 90 DAYS BY INHALATION TO VAPORS OF SIMILAR SOLVENTS SHOWED EVIDENCE OF KIDNEY DAMAGE. THE RELEVANCE OF THIS EFFECT TO MAN IS UNKNOWN. IN ONE OF THE STUDIES A LOW GRADE ANEMIA WAS ALSO OBSERVED.

SECTION VII

PHYSICAL DATA

BOILING POINT: 350-415
(DEG F)

SPECIFIC GRAVITY: 0.79 @
(H2O=1) 60 DEG F

VAPOR PRESSURE: <5 @ 100 DEG F
(MM HG)

PRODUCT NAME: SHELL SOL 142 HT

MSDS 7,653-
PAGE 3

MELTING POINT: NOT AVAILABLE
(DEG F)

SOLUBILITY: NEGLIGIBLE
(IN WATER)

VAPOR DENSITY: 5.3
(AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): 0.03

APPEARANCE AND ODOR:
LIGHT COLORED LIQUID. HYDROCARBON ODOR.

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
145 DEG F (TCC)

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: 1 ; UPPER: 7

EXTINGUISHING MEDIA

USE WATER FOG, FOAM, DRY CHEMICAL OR CO₂. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOW AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

CAUTION. COMBUSTIBLE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION IX

REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION X

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING

AVOID CONTACT WITH EYES. WEAR SAFETY GLASSES OR GOGGLES AS APPROPRIATE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL-RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE*

ADDITIONAL PROTECTIVE MEASURES

*BEST PROTECTION IS PROVIDED BY NITRILE MATERIAL. USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA THEN LAUNDRY BEFORE REUSING.

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

CAUTION. COMBUSTIBLE. *** LARGE SPILLS *** ELIMINATE POTENTIAL SOURCES OF IGNITION. WEAR APPROPRIATE RESPIRATOR AND OTHER PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIAL. PLACE IN NON-LEAKING CONTAINERS AND SEAL TIGHTLY FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTION AS ABOVE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL.

SECTION XII

SPECIAL PRECAUTIONS

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION.

CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS. DO NOT PRESSURIZE DRUM CONTAINERS TO EMPTY THEM.

STATIC ELECTRICITY MAY ACCUMULATE AND CREATE A FIRE HAZARD. GROUND FIXED EQUIPMENT. BOND AND GROUND TRANSFER CONTAINERS AND EQUIPMENT.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS, OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA BEFORE LAUNDERING.

SECTION XIII

TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
COMBUSTIBLE LIQUID, III

D.O.T. PROPER SHIPPING NAME:
PETROLEUM DISTILLATES, N.O.S. (PETROLEUM NAPHTHA)

OTHER REQUIREMENTS:

UN1268, GUIDE 27. NOT REGULATED BY D.O.T. IF IN A CONTAINER OF 119 GALLON CAPACITY OR LESS.

SECTION XIV

OTHER REGULATORY CONTROLS

THIS PRODUCT IS LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV

STATE REGULATORY INFORMATION

PRODUCT NAME: SHELL SOL 142 HT

MSDS 7,653
PAGE 5

BASED ON INFORMATION AVAILABLE TO SHELL, THIS PRODUCT DOES NOT CONTAIN ANY CHEMICAL SUBSTANCE
REGULATED BY A SPECIFIC STATE LIST.

SECTION XVI

SPECIAL NOTES

THIS MSDS REVISION HAS CHANGES IN SECTION XIII. A SPANISH TRANSLATION OF THIS MSDS MAY BE OBTAIN
BY CALLING 1-800-240-MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRE
HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR TH
RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE
USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: JULY 20, 1994

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

J. C. WILLETT

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210



ENVIRONMENTAL DATA SHEET

EDS NUMBER ▶ 7,653

PAG

97449 (9-87)

PRODUCT ▶ SHELL SOL 142 HT

PRODUCT
CODE ▶ 84044

SECTION I

PRODUCT/COMPOSITION

NO.

COMPONENT

CAS NUMBER

PERCENT

P SHELL SOL 142 HT*

64742-88-7

100

*A COMPLEX COMBINATION OF PREDOMINANTLY C9-C12 HYDROCARBONS: EXACT COMPOSITION WILL VARY.

SECTION II

SARA TITLE III INFORMATION

NO.

EHS RQ (LBS)
(*1)EHS TPQ (LBS)
(*2)SEC 313
(*3)313 CATEGORY
(*4)311/312 CATEGORIES
(*5)

P

H-1, H-2, P-3

FOOTNOTES

- *1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC.302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC RELEASE INVENTORY FC
*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL P-3 = FIRE HAZARD P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III

ENVIRONMENTAL RELEASE INFORMATION

UNDER EPA-CWA, THIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311. SPILLS INTO OR LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

SECTION IV

RCRA INFORMATION

IF THIS PRODUCT BECOMES A WASTE, IT WOULD NOT BE A HAZARDOUS WASTE BY RCRA CRITERIA (40 CFR 261). PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

PRODUCT NAME: SHELL SOL 142 HT

EDS 7,653
PAGE 2

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: JULY 20, 1994

SHELL OIL COMPANY
CORPORATE ENVIRONMENTAL AFFAIRS
P. O. BOX 4320
HOUSTON, TX 77210

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL
(713) 241-2252

FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300

05/08/90

NO.

SECTION 1 PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME	ISOPAR E	ISOMET
CHEMICAL NAME	Not Applicable: Blend	
CHEMICAL FAMILY	CAS 64742-48-9	
PRODUCT APPEARANCE/DESCRIPTION	Synthetic Isoparaffinic Hydrocarbon Clear colorless liquid.	
RECEIVED JUL 18 1990		
EMERGENCY TELEPHONE NUMBERS:	EXXON CHEMICAL AMERICAS	713-870-6000
	CHEMTREC	800-424-9300

SECTION 2 HAZARDOUS INGREDIENT INFORMATION

This product is hazardous as defined in 29 CFR 1910.1200.
OSHA HAZARD
Flammable

For additional information see Section 3.

SECTION 3 HEALTH INFORMATION & PROTECTION

NATURE OF HAZARD

EYE CONTACT:

Slightly irritating but does not injure eye tissue.

SKIN CONTACT:

Frequent or prolonged contact may irritate and cause dermatitis.
Low order of toxicity.

INHALATION:

High vapor concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.

INGESTION:

Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.
Minimal toxicity.

FIRST AID

EYE CONTACT:

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Flush with large amounts of water; use soap if available.
Remove grossly contaminated clothing, including shoes, and launder before reuse.

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE. WE DO NOT ACCEPT LIABILITY FOR ANY LOSS OR DAMAGE THAT MAY OCCUR FROM THE USE OF THIS INFORMATION NOR DO WE OFFER WARRANTY AGAINST PATENT INFRINGEMENT.

ACUTE TOXICITY DATA IS AVAILABLE UPON REQUEST.

WORKPLACE EXPOSURE LIMITS

EXXON RECOMMENDS THE FOLLOWING OCCUPATIONAL EXPOSURE LIMITS: -
400 ppm total hydrocarbon based on composition.

PRECAUTIONS

PERSONAL PROTECTION

For open systems where contact is likely, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.

Where contact may occur, wear safety glasses with side shields.

Where concentrations in air may exceed the limits given in this

Section and engineering, work practice or other means of exposure

reduction are not adequate, NIOSH/MSHA approved respirators may
be necessary to prevent overexposure by inhalation.

VENTILATION

The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated.

Use explosion-proof ventilation equipment.

CHRONIC EFFECTS

Laboratory animal studies have shown that prolonged and repeated inhalation exposure to light hydrocarbon vapors in the same naphtha boiling range as this product can produce adverse kidney effects in male rats. However, these effects were not observed in similar studies with female rats and male and female mice and in limited studies with other animal species. Additionally, in a number of human studies, there was no clinical evidence of such effects at normal occupational levels. It is therefore highly unlikely that the kidney effects observed in male rats have significant implications for humans exposed at or below recommended vapor limits in the workplace.

CHRONIC TOXICITY DATA IS AVAILABLE UPON REQUEST

SECTION 4 FIRE & EXPLOSION HAZARD

FLASHPOINT: 45 Deg F. METHOD: TCC

FLAMMABLE LIMITS: LEL: 0.6 UEL: 7.0 @ 77 Deg F.

AUTOIGNITION TEMPERATURE: 720 Deg F. NOTE: Approximate

GENERAL HAZARD

Flammable Liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint.

Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge.

"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

FIRE FIGHTING

Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.

Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.

Avoid spraying water directly into storage containers due to danger of

boilover.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

No unusual

SECTION 5 SPILL CONTROL PROCEDURE

LAND SPILL

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 7) notify the National Response Center.

Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.

Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Remove from surface by skimming or with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 6 NOTES

No notes applicable.

SECTION 7 REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

DOT PROPER SHIPPING NAME:

PETROLEUM NAPHTHA, Flammable Liquid, UN 1255

DOT HAZARD CLASS: Flammable Liquid

DOT IDENTIFICATION NUMBER: UN 1255

NAME: Naphtha, petroleum

TSCA:

This product is listed on the TSCA Inventory at CAS Registry Number 64742-48-9

CERCLA:

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories: Delayed Health, Fire.

CHEMICAL

05/08/90 ISOPAR E

NO.

SECTION 8 TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SPECIFIC GRAVITY:

0.72 at 60

SOLUBILITY IN WATER, WT. % AT °F:

Less Than 10.00

SP. GRAV. OF VAPOR, at 1 atm (Air=1):

4.24

EVAPORATION RATE, n-Bu Acetate=1:

1.6

VAPOR PRESSURE, mmHg at °F:

45 at 100

VISCOSITY OF LIQUID, CST-AT °F:

1 at 77

FREEZING/MELTING POINT, °F:

Less than 32

BOILING POINT, °F:

235 to 290 Approximate

SECTION 9 REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID INSTABILITY:

Not Applicable

HAZARDOUS POLYMERIZATION:

Will not occur

COND. TO AVOID HAZARDOUS POLYMERIZATION:

Not Applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

None

SECTION 10 STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD:

Yes, use proper grounding procedure

STORAGE TEMPERATURE, °F:

Ambient

AGE/TRANSPORT PRESSURE, mmHg:

Atmospheric

LOADING/UNLOADING TEMPERATURE, °F:

Ambient

VISC. AT LOADING/UNLOADING TEMP., cST:

1

REVISION SUMMARY:

Since FEBRUARY 7, 1990 this MSDS has been revised in Section(s):

7

REFERENCE NUMBER:

HDHA-C-25040

DATE PREPARED:

May 8, 1990

SUPERCEDES ISSUE DATE:

February 7, 1990

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 713-870-6885



Material Safety Data Sheet

**SAFETY-KLEEN
PREMIUM SOLVENT**

*used in Waste Treatment
Parts washer*

Part Number: 6605

SAFETY-KLEEN PREMIUM SOLVENT
MATERIAL SAFETY DATA SHEET FOR U.S.A. AND CANADA

SECTION 1 – PRODUCT AND PREPARATION INFORMATION

PRODUCT INFORMATION

IDENTITY (TRADE NAME): SAFETY-KLEEN PREMIUM SOLVENT

SYNONYMS: Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Mineral Spirits

SK PART NUMBER(S): 6605

FAMILY/CHEMICAL NAME: Petroleum hydrocarbon

PRODUCT USE: Cleaning and degreasing metal parts.
If this product is used in combination with other chemicals, refer to the Material Safety Data Sheets for those chemicals.

24-HOUR EMERGENCY TELEPHONE

These numbers are for emergency use only. If you desire non-emergency information about this product, please call a telephone number listed below.

MEDICAL:

1-800-752-7869 (U.S.A.)
1-312-942-5969 (CANADA)

RUSH POISON CONTROL CENTER
CHICAGO, ILLINOIS, U.S.A.

TRANSPORTATION:

1-708-888-4660 (U.S.A.)
SAFETY-KLEEN ENVIRONMENT,
HEALTH AND SAFETY DEPARTMENT
1-613-996-6666 (CANADA)
CANUTEC

MANUFACTURER/SUPPLIER: Safety-Kleen Corp. - 1000 North Randall Road - Elgin, IL, U.S.A. 60123-7857
Telephone number: 1-800-669-5840
Safety-Kleen Canada Inc. - 300 Woolwich Street South - Breslau, ON, Canada N0B 1M0
Telephone number: 1-800-265-2792

PREPARATION INFORMATION

MSDS FORM NO.: 82529
REVISION DATE: February 2, 1994
ORIGINAL ISSUE DATE: January 7, 1993
SUPERSEDES: February 11, 1993
PREPARED BY: Product MSDS Coordinator
APPROVED BY: MSDS Task Force
TELEPHONE NUMBER: For Product Technical Information Call 1-312-694-2700 (U.S.A.);
1-519-648-2291 (Canada)

SECTION 2 – HAZARDOUS COMPONENTS

NAME	SYNONYM	CAS NO.	WT%	OSHA PEL		ACGIH TLV		OTHER DATA	
				TWA	STEL	TWA	STEL	LD ^a	LC ^b
Distillates (petroleum) hydrotreated light	Solvent naphtha (petroleum), heavy aliph., hydrotreated	64742-47-8 ^{e,f}	100	500 ^{c,d} ppm	N.Av.	100 ^c ppm	N.Av.	> 5000	> 5500 ^c mg/m ³ /4 hours

N.Av. = Not Available

^aOral-Rat LD50 (mg/kg)

^bInhalation-Rat LC50

^cFor Stoddard Solvent CAS 8052-41-3

^dReference source 1910.1000 29 CFR Ch. XVII (7-1-92 edition): 100 ppm TWA

^eFor Stoddard Solvent: 29500 mg/m³ (approximately 5000 ppm) IDLH

^fFor Petroleum Distillates: 10000 ppm IDLH

SAFETY-KLEEN PREMIUM SOLVENT
MATERIAL SAFETY DATA SHEET FOR U.S.A. AND CANADA

SECTION 5 -- FIRE AND EXPLOSION HAZARD DATA

**EMERGENCY RESPONSE
GUIDE NUMBER:**

27

Reference 1993 *Emergency Response Guidebook* (RSPA P 5800.6)

**FIRE AND
EXPLOSION HAZARDS:**

Decomposition and combustion products may be toxic. Heated containers may rupture, explode, or be thrown into the air. Vapors are heavier than air and may travel great distances to ignition source and flash back. Vapor explosion hazard indoors, outdoors, or in sewers. Run-off to sewer may create fire or explosion hazard. Not sensitive to mechanical impact. Material may be sensitive to static discharge, which could result in fire or explosion.

FIRE FIGHTING PROCEDURES:

Keep storage containers cool with water spray. Positive-pressure, self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide limited protection.

EXTINGUISHING MEDIA:

Carbon dioxide, foam, dry chemical, or water spray.

CONDITIONS OF FLAMMABILITY:

Heat, sparks, or flame.

FLASH POINT:

150°F (66°C) (approximately) Tag Closed Cup

AUTOIGNITION TEMPERATURE:

440°F (227°C) (minimum)

FLAMMABLE LIMITS IN AIR:

LOWER: 1.0 Vol. %

UPPER: 9.3 Vol. %

**HAZARDOUS COMBUSTION
PRODUCTS:**

Burning may produce carbon monoxide.

SECTION 6 -- REACTIVITY DATA

STABILITY:

Stable under normal temperatures and pressures, and not reactive with water.

**INCOMPATIBILITY (MATERIALS AND
CONDITIONS TO AVOID):**

Avoid strong acids, bases, or oxidizing agents. Chlorine may cause a violent reaction. Avoid heat, sparks, or flame.

HAZARDOUS POLYMERIZATION:

Not known to occur under normal temperatures and pressures.

**HAZARDOUS DECOMPOSITION
PRODUCTS:**

None under normal temperatures and pressures.

SECTION 7 -- PREVENTIVE MEASURES

PRECAUTIONS FOR SAFE USE AND HANDLING

**HANDLING
PRECAUTIONS:**

Keep away from heat, sparks, or flame. Where explosive mixtures may be present, equipment safe for such locations should be used. When transferring material, metal containers, including tank cars and trucks, should be grounded and bonded. Avoid contact with eyes, skin, clothing, or shoes. Use in well ventilated area and avoid breathing vapor or mist.

**PERSONAL
HYGIENE:**

Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco products. Clean contaminated clothing, shoes, and protective equipment before reuse. Discard contaminated clothing, shoes, or protective equipment if they cannot be thoroughly cleaned.

**SHIPPING AND
STORING
PRECAUTIONS:**

Keep container tightly closed when not in use and during transport. Do not pressurize, drill, cut, heat, weld, braze, grind, or expose containers to flame or other sources of ignition. Empty product containers may contain product residue. See Section 9 for Packing Group information.

SAFETY-KLEEN PREMIUM SOLVENT
MATERIAL SAFETY DATA SHEET FOR U.S.A. AND CANADA

**COEFFICIENT OF WATER/OIL
DISTRIBUTION:**

less than 1

MOLECULAR WEIGHT:

155 to 180

SECTION 9 – OTHER REGULATORY INFORMATION

TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: COMBUSTIBLE LIQUID, N.O.S. (PETROLEUM NAPHTHA)

DOT CLASS: Combustible Liquid

DOT ID NUMBER: NA1993 PG III

TDG CLASSIFICATION: Not regulated.

SARA TITLE III: Product does not contain toxic chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Product poses the following physical and health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986:

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

WHMIS CLASSIFICATION: B3, Flammable and Combustible Material, Combustible Liquids;
D2B, Poisonous and Infectious Material, Materials Causing Other Toxic Effects,
Toxic Material

TSCA: All of the components for this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.

CALIFORNIA: This product is not for sale or use in the State of California.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the material as supplied to the user.



APPROVED FOR USE BY THE
SAFETY & HEALTH OFFICE

MSDS #:

DATE REVIEWED:

REVIEWED BY:

720

1975

MATERIAL SAFETY DATA SHEET

97368 (4-85)

MSDS NUMBER

- 7,653-1 T

PAG

24 HOUR EMERGENCY ASSISTANCE

SHELL: 713-473-9461 CHEMTREC: 800-424-9300

GENERAL MSDS ASSISTANCE

SHELL: 713-241-4819

ACUTE HEALTH *
+ 2

FIRE
2

REACTIVITY
0

HAZARD RATING

LEAST - 0

SLIGHT - 1

MODERATE - 2

HIGH - 3

EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION!
... AND
PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

SECTION I

NAME

PRODUCT SHELL SOL 142 HT

CHEMICAL NAME SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPHATIC

CHEMICAL FAMILY HYDROCARBON SOLVENT

SHELL CODE 84044

SECTION II-A

PRODUCT/INGREDIENT

NO.

COMPOSITION

CAS NUMBER

PERCENT

P SHELL SOL 142 HT*

64742-88-7

100

*A COMPLEX COMBINATION OF PREDOMINANTLY C9-C12 HYDROCARBONS; EXACT COMPOSITION WILL VARY.

HMIS HAZARD RATING: HEALTH 1 FIRE 2 REACTIVITY 0

SECTION II-B

ACUTE TOXICITY DATA

NO. ACUTE ORAL LD50

ACUTE DERMAL LD50

ACUTE INHALATION LC50

** >25 ML/KG (RAT)

>4 ML/KG (RABBIT)

>700 PPM/4H (RAT)

**BASED ON EITHER PRODUCT OR ESSENTIALLY SIMILAR PRODUCT TESTING.

SECTION III

HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT

LIQUID IS PRACTICALLY NONIRRITATING TO THE EYES.

SKIN CONTACT

LIQUID IS SLIGHTLY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS.

INHALATION

VAPORS MAY CAUSE IRRITATION TO NOSE, THROAT, AND RESPIRATORY TRACT. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION.

INGESTION

INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

SIGNS AND SYMPTOMS

IRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR.

AGGRAVATED MEDICAL CONDITIONS

PREEXISTING EYE, SKIN, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

SECTION IV**OCCUPATIONAL EXPOSURE LIMITS**

NO.	PEL/TWA	OSHA	PEL/CEILING	TLV/TWA	ACGIH	TLV/STEL	OTHER
P*	100 PPM			100 PPM			

*RECOMMEND THAT LIMITS FOR STODDARD SOLVENT BE USED AS A GUIDE.

SECTION V**EMERGENCY AND FIRST AID PROCEDURES****EYE CONTACT**

FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT

REMOVE CONTAMINATED CLOTHING/SHOES. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING.

ASPIRATION

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.*

NOTE TO PHYSICIAN

*IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VI**SUPPLEMENTAL HEALTH INFORMATION**

MALE RATS EXPOSED FOR 90 DAYS BY INHALATION TO VAPORS OF SIMILAR SOLVENTS SHOWED EVIDENCE OF KIDNEY DAMAGE. THE RELEVANCE OF THIS EFFECT TO MAN IS UNKNOWN. IN ONE OF THE STUDIES A LOW GRADE ANEMIA WAS ALSO OBSERVED.

SECTION VII**PHYSICAL DATA**

BOILING POINT: 350-415
(DEG F)

SPECIFIC GRAVITY: 0.79 @
(H2O=1) 60 DEG F

VAPOR PRESSURE: <5 @ 100 DEG F
(MM HG)

PRODUCT NAME: SHELL SOL 142 HT

MSDS 7,653
PAGE 3

MELTING POINT: NOT AVAILABLE
(DEG F)

SOLUBILITY:
(IN WATER)

NEGLECTIBLE

VAPOR DENSITY: 5.3
(AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): 0.03

APPEARANCE AND ODOR:
LIGHT COLORED LIQUID. HYDROCARBON ODOR.

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
145 DEG F (TCC)

FLAMMABLE LIMITS % VOLUME IN AIR
LOWER: 1 ; UPPER: 7

EXTINGUISHING MEDIA

USE WATER FOG, FOAM, DRY CHEMICAL OR CO₂. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLAMMABLE AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

CAUTION. COMBUSTIBLE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS). INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION IX

REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION X

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING

AVOID CONTACT WITH EYES. WEAR SAFETY GLASSES OR GOGGLES AS APPROPRIATE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL-RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE*

ADDITIONAL PROTECTIVE MEASURES

*BEST PROTECTION IS PROVIDED BY NITRILE MATERIAL. USE EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA THEN LAUNDED BEFORE REUSING.

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES

CAUTION. COMBUSTIBLE. *** LARGE SPILLS *** ELIMINATE POTENTIAL SOURCES OF IGNITION. WEAR APPROPRIATE RESPIRATOR AND OTHER PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS AND SEAL TIGHTLY FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTION AS ABOVE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL.

SECTION XII

SPECIAL PRECAUTIONS

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION.

CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS. DO NOT PRESSURIZE DRUM CONTAINERS TO EMPTY THEM.

STATIC ELECTRICITY MAY ACCUMULATE AND CREATE A FIRE HAZARD. GROUND FIXED EQUIPMENT. BOND AND GROUND TRANSFER CONTAINERS AND EQUIPMENT.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, APPLYING COSMETICS, OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA BEFORE LAUNDERING.

SECTION XIII

TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
COMBUSTIBLE LIQUID, III

D.O.T. PROPER SHIPPING NAME:
PETROLEUM DISTILLATES, N.O.S. (PETROLEUM NAPHTHA)

OTHER REQUIREMENTS:
UN1268, GUIDE 27. NOT REGULATED BY D.O.T. IF IN A CONTAINER OF 119 GALLON CAPACITY OR LESS.

SECTION XIV

OTHER REGULATORY CONTROLS

THIS PRODUCT IS LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XV

STATE REGULATORY INFORMATION

PRODUCT NAME: SHELL SOL 142 HT

MSDS 7,653
PAGE 5

BASED ON INFORMATION AVAILABLE TO SHELL, THIS PRODUCT DOES NOT CONTAIN ANY CHEMICAL SUBSTANCE REGULATED BY A SPECIFIC STATE LIST.

SECTION XVI

SPECIAL NOTES

THIS MSDS REVISION HAS CHANGES IN SECTION XIII. A SPANISH TRANSLATION OF THIS MSDS MAY BE OBTAINED BY CALLING 1-800-240-MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

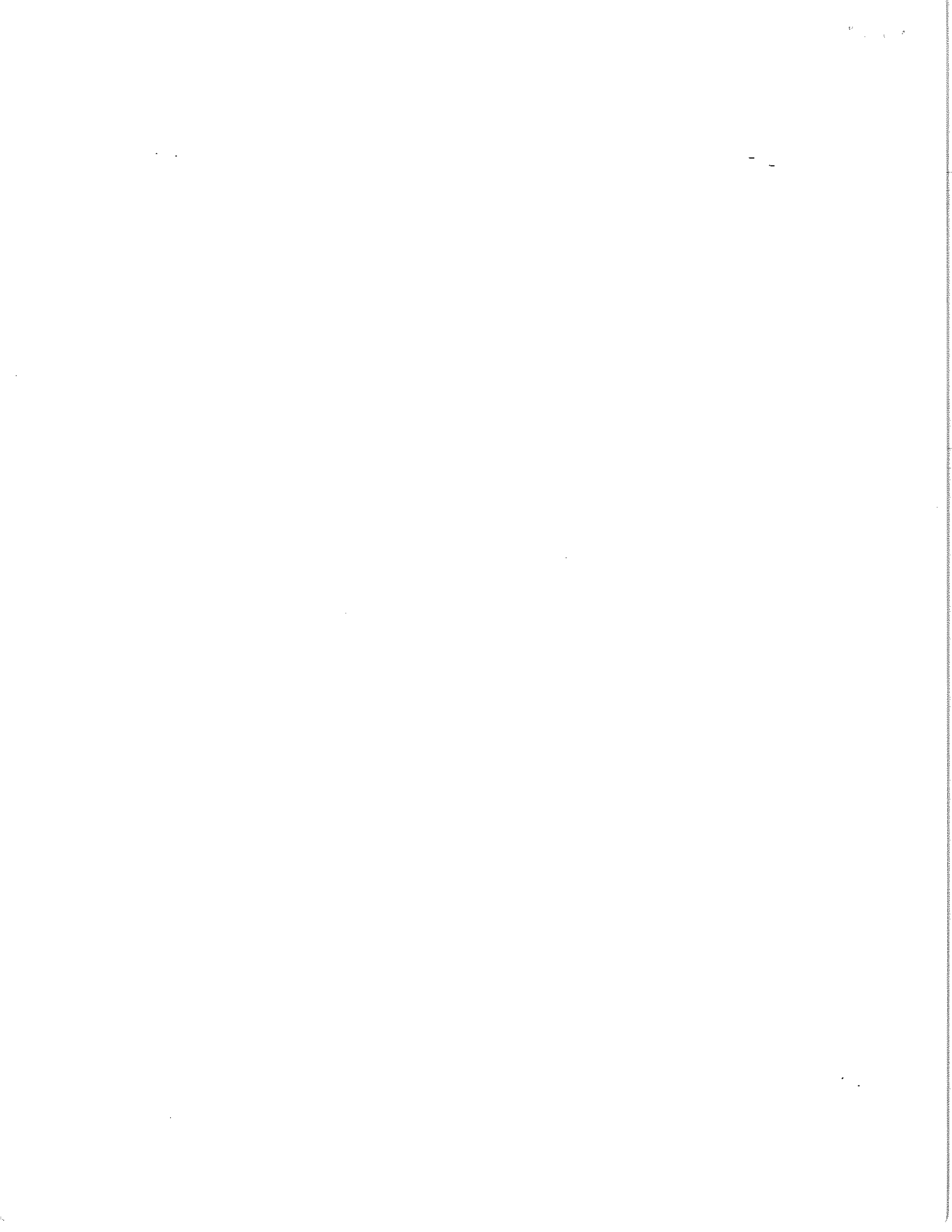
DATE PREPARED: JULY 20, 1994

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

J. C. WILLETT

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210



TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION

P.O. Box 13087

Austin, Texas 78711-3087



TRK
42216
TRK
548026

Comp
154576871 (D)

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09/30/95

**UNIFORM HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

T X 1 2 0 0 9 3 9 6 2 6

Manifest
Document No.

7 3 1 7 1

2. Page 1
of 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address
BUREAU OF ENGRAVING & PRINTING
9000 BLUE MOUND ROAD
FORT WORTH, TX 76131
4. Generator's Phone (817) 847-3946

A. State Manifest Document Number

01131617

B. State Generator's ID

5. Transporter 1 Company Name
TRI-STATE MOTOR TRANSIT COMPANY

6. US EPA ID Number

M O D 0 9 5 0 3 8 9 9 8

C. State Transporter's ID

D. Transporter's Phone 800/234-8768

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
LAIDLAW ENVIRONMENTAL SERVICES, INC.
3536 FITE ROAD
MILLINGTON, TN 38053

10. US EPA ID Number

T N D 0 0 0 6 1 4 3 2 1

G. State Facility's ID

H. Facility's Phone

901/358-5695

11A. HM 11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

Waste No.

X a. RC, WASTE FLAMMABLE LIQUID, N.O.S., (MIXED SOLVENTS), 3, UN1993, II

0 0 7

D M

0 2 1 0 0

P

D001

X b. WASTE FLAMMABLE LIQUID, N.O.S., (WASTE OILS), 3, UN1993, III

0 1 7

D M

0 5 1 0 0

P

D001

X c. HAZARDOUS WASTE SOLID, N.O.S., (ORGANIC DEBRIS), 9, NA3077, III

0 0 2

D M

0 0 7 0 0

P

D004, D005, D006, D007, 8, 9, 10, 11

X d. WASTE CAUSTIC ALKALI LIQUID, N.O.S., (CAUSTIC CLEANER), 8, UN1719, II

0 0 1

D F

0 0 3 5 0

P

D002

J. Additional Descriptions for Materials Listed Above

a) M62611101 MIXED SOLVENTS

b) M62611103 WASTE OILS

c) M626DS059 ORGANIC DEBRIS

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information 24 HR. EMERGENCY # 800-535-5053
GUIDE # a) 128 b) 128 c) 171 d) 154

TRUCK # 40490
TPO # 84166
DPO # 84168

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

RICK A. HILL

Signature

Rick Hill

Month Day Year

11/1/97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JEFF MILLER

Signature

Jeff Miller

Date

Month Day Year

11/1/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

KENNETH L. RAGLAND

Signature

Kenneth L. Ragland

Date

Month Day Year

11/1/97

NATURAL RESOURCE
CONSERVATION COMMISSION

Box 13087

Austin, Texas 78711-3087



TRC
4234
Comp
1845687
PRR 548024

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09/30/95

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

T. X. 1. 2. 0. 0. 9. 3. 9. 6. 2. 6

Manifest
Document No.

2. Page 1
of 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address

BUREAU OF ENGRAVING & PRINTING
9000 BLUE MOUND ROAD
FORT WORTH, TX 76131

4. Generator's Phone (817) 847-3946

5. Transporter 1 Company Name

TRI-STATE MOTOR TRANSIT COMPANY

6. US EPA ID Number

M. O. D. 0. 9. 5. 0. 3. 8. 9. 9. 8

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

LIDLAW ENVIRONMENTAL SERVICES, INC.

3536 FITE ROAD

MILLINGTON, TN 38053

10. US EPA ID Number

T. N. D. 0. 0. 0. 6. 1. 4. 3. 2. 1

A. State Manifest Document Number

01131618

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone 800/234-8768

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

901/358-5695

11A.
HM

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

Waste No.

X a. RQ, WASTE ALKALI LIQUID, N.O.S., (PRINTING PRESS RINSE), 8, UN1719, II

001 D.M.

00350

P

D002

X b. RQ, HAZARDOUS WASTE SOLID, N.O.S., (F006 SOLID), 9, NA3077, III

001 D.M.

00400

P

D004, 5, 6, 7, 8, 9, 10, 11, F006

c. NON-REGULATED SOLIDS
(OIL FILTERS)

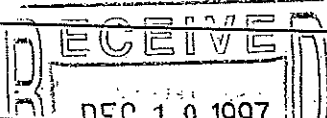
002 D.M.

00400

P

N/A

d.



J. Additional Descriptions for Materials Listed Above

a) M626BL101 PRINTING PRESS RINSE

b) M626MS023 F006 SOLIDS

c) M626NS104 OIL FILTERS

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

24 HR. EMERGENCY # 800/535-5053

GUIDE #

a) 154 b) 171

TRUCK # 40490
TPO # 84166
DPO # 84168

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.

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Printed/Typed Name

RICK A. HILL

Signature

Rick Hill

Month Day Year

1/1/97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JEFF MILLER

Signature

Jeff Miller

Date

Month Day Year

1/1/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

1/1/97

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

KENNETH L. RAGLAND

Signature

Kenneth L. Ragland

Date

Month Day Year

1/1/97

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION.

P.O. Box 13087

Austin, Texas 78711-3087



Form approved. OMB No. 2050-0039, expires 09/30/95

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. T X 1 2 0 0 9 3 9 6 2 6	Manifest Document No. 8 0 1 5 1	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address BUREAU OF ENGRAVING & PRINTING 9000 BLUE MOUND ROAD FORT WORTH, TX 76131				A. State Manifest Document Number 01131619		
4. Generator's Phone (817) 847-3946				B. State Generator's ID 38907		
5. Transporter 1 Company Name TRI-STATE MOTOR TRANSIT COMPANY		6. US EPA ID Number M O D 0 9 5 0 3 8 9 9 8		C. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 800-234-8768		
9. Designated Facility Name and Site Address LAIDLAW ENVIRONMENTAL SERVICES, INC. 3536 FITE ROAD MILLINGTON, TN 38053				E. State Facility's ID		
10. US EPA ID Number T N D 0 0 0 6 1 4 3 2 1				F. Facility's Phone 901-358-5695		
11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. WASTE FLAMMABLE LIQUID, N.O.S., (WASTE OILS), 3, UN1993, III	002	D.M.	007.00	P	D001
X	b. RQ, WASTE FLAMMABLE LIQUID, N.O.S., (MIXED SOLVENTS), 3, UN1993, II	002	D.M.	006.00	P	D001
X	c. RQ, HAZARDOUS WASTE SOLID, N.O.S., (FOO6 SOLID) 9, NA3077, III	002	D.M.	008.00	P	D004 5, 6, 7, 8, 9, 10, 11 F006
X	d. HAZARDOUS WASTE SOLID, N.O.S., (ORGANIC DEBRIS), 9, NA3077, III	003	D.M.	010.00	P	D004 5, 6, 7, 8, 9, 10, 11
J. Additional Descriptions for Materials Listed Above a) M626IL103 WASTE OILS b) M626IL101 MIXED SOLVENTS c) M626MS023 F006 SOLIDS d) M626DS059 ORGANIC DEBRIS				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information 24 HR. EMERGENCY # 800-535-5053 TRUCK # DE500 GUIDE# a) 128 b) 128 c) 171 d) 171 TPO # 84898 DPO # 84899						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Rick A. Hill		Signature Rick A. Hill		Month Day Year 10/1/98		
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name Scripter, Eric		Signature [Signature]		Month Day Year 10/1/98		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Month Day Year		
19. Discrepancy Indication Space Line 11A container no. should read 3 DM instead of 2. Pre 01-30-98.						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name Donna K. Brown		Signature Donna K. Brown		Month Day Year 10/1/98		

NATURAL RESOURCE
CONSERVATION COMMISSION

Box 13087

Austin, Texas 78711-3087



Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09/30/95

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No. T. X. 1. 2. 0. 0. 9. 3. 9. 6. 2. 6
Manifest Document No. 80152

2. Page 1
of 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address
BUREAU OF ENGRAVING & PRINTING
9000 BLUE MOUND ROAD
FORT WORTH, TX 76131

4. Generator's Phone (817) 847-3946

5. Transporter 1 Company Name
TRI-STATE MOTOR TRANSIT COMPANY

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address
LAIDLAW ENVIRONMENTAL SERVICES, INC.
3536 FITE ROAD
MILLINGTON, TN 38053

11A. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

X a. HAZARDOUS WASTE SOLID, N.O.S., (ORGANIC DEBRIS), 9, NA3077, III

X b. WASTE CAUSTIC ALKALI LIQUID, N.O.S., (CAUSTIC CLEANER), 8, UN1719, II

X c. WASTE CAUSTIC ALKALI LIQUID, N.O.S., (CAUSTIC CLEANER), 8, UN1719, II

X d. RQ, HAZARDOUS WASTE SOLID, N.O.S., (MERCURY DEBRIS), 9, NA3077, II

J. Additional Descriptions for Materials Listed Above:

a) M626DS059 ORGANIC DEBRIS

b) M626BL012 CAUSTIC CLEANER

c) M626BL012 CAUSTIC CLEANER

d) M626DS043 MERCURY DEBRIS

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information 24 HR. EMERGENCY # 800-535-5053

TRUCK # DE500
TPO # 84898
DPO # 84899

GUIDE # a) 171 b) 154 c) 154 d) 171

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
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Printed/Typed Name

Rick A. Hill

Signature

Rick A. Hill

Month Day Year

01/15/98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

SCRIPTER, ETC

Signature

Scripter, Etc

Date

Month Day Year

01/15/98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date

Month Day Year

19. Discrepancy Indication Space

of 3, line 11A container no should read 2 instead

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Donna K. Brown

Signature

Donna K. Brown

Date

Month Day Year

10/12/98

NATURAL RESOURCE
CONSERVATION COMMISSION

Box 13087

Austin, Texas 78711-3087



Use print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039, expires 09/30/95

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. T X 1 2 0 0 9 3 9 6 2 6		Manifest Document No. 8 0 1 5 3		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address BUREAU OF ENGRAVING & PRINTING 9000 BLUE MOUND ROAD FORT WORTH, TX 76131						A. State Manifest Document Number 01131622			
4. Generator's Phone (817) 847-3946						B. State Generator's ID 38907			
5. Transporter 1 Company Name TRI-STATE MOTOR TRANSIT COMPANY						C. State Transporter's ID			
6. US EPA ID Number M O D 0 9 5 0 3 8 9 9 8						D. Transporter's Phone 800-234-8768			
7. Transporter 2 Company Name						E. State Transporter's ID			
8. US EPA ID Number						F. Transporter's Phone			
9. Designated Facility Name and Site Address LAIDLAW ENVIRONMENTAL SERVICES, INC. 3536 FITE ROAD MILLINGTON, TN 38053						G. State Facility's ID			
10. US EPA ID Number T N D 0 0 0 6 1 4 3 2 1						H. Facility's Phone 901/358-5695			
11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)					12. Containers	13. Total Quantity	14. Unit Wt/Vol	Waste No.
X	a. HAZARDOUS WASTE SOLID, N.O.S., (FLOURESCENT LIGHT BULBS), 9, NA3077, III					001 D M	00600	P	D009
X	b. WASTE BATTERIES, FILLED W/ACID 8, UN2794, II					001 D F	00300	P	D002, D008
	c.								
	d.								
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above			
a) M626DS102 FLOURESCENT LIGHT BULBS									
B) M626AL007 WET LEAD ACID BATTERIES									
15. Special Handling Instructions and Additional Information 24 HR. EMERGENCY # 800/535-5053 GUIDE # a) 171 B) 154						TRUCK # DE500 TPO # 84898 DPO # 84899			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name Rick A. Hill						Signature Rick A. Hill		Month Day Year 10/1/98	
17. Transporter 1 Acknowledgement of Receipt of Materials						Signature Scripter Eric		Date 10/1/98	
18. Transporter 2 Acknowledgement of Receipt of Materials						Signature		Date	
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name Donna K. Brown						Signature Donna K. Brown		Date 10/2/98	

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION

P.O. Box 13087
Austin, Texas 78711-0287



Print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. TX 120093962		Manifest Document No. 14872		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.									
3. Generator's Name and Mailing Address Bureau of Engraving & Printing 9000 Blue Mound Road Fort Worth, TX 76131						A. State Manifest Document Number 01514872											
4. Generator's Phone (817) 847-3820						B. State Generator's ID 38901											
5. Transporter 1 Company Name Clean Harbors Environmental Services Inc. VMD 039322250						C. State Transporter's ID 41315											
7. Transporter 2 Company Name						D. Transporter's Phone 281-845-1800											
9. Designated Facility Name and Site Address Spring Grove Resource Recovery 4879 Spring Grove Avenue Cincinnati, OH 45232						G. State Facility's ID 20031											
10. US EPA ID Number 10HD0000816629						H. Facility's Phone 513-681-5738											
11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group)						12. Containers No. & Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.					
a. RQ. WASTE CORROSIVE LIQUIDS, N.O.S. (CONTAINS POTASSIUM HYDROXIDE) (K086), 8, UN1760, II						006 DM		03300		P		K086 D002 D005					
b. RQ. WASTE CORROSIVE LIQUIDS, N.O.S. (CONTAINS POTASSIUM HYDROXIDE) (K086), 8, UN1760, II						002 DM		01100		P		K086 D002 D005					
c. RQ. WASTE FLAMMABLE LIQUIDS, N.O.S. (PETROLEUM DISTILLATES, MINERAL SPIRITS), 3, UN1993, II						006 DM		02400		P		D001					
d. RQ. WASTE FLAMMABLE LIQUIDS, N.O.S. (D001) (PETROLEUM OIL), 3, UN1993, III						009 DM		02700		P		D001					
16. ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE						K. Handling Codes for Wastes Listed Above											
11a (SL), (C, E, T), (154) 11b (SL), (C, E, T), (154) 11c (SL), (I), (128) 11d (SL), (I), (128)						11a. 004310H IN EMERGENCY, CALL CHES 1-800-645-8265 vo# D9106188 11c. 0003203H 11d. 0002209H											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.																	
Printed/Typed Name: COLLEEN MCKINNEY						Signature: Colleen McKinney				Month Day Year: 05/01/98							
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name: Robert A. Hammon				Signature: Robert A. Hammon				Month Day Year: 5/1/98			
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name:				Signature:				Month Day Year:			
19. Discrepancy Indication Space																	
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.																	
Printed/Typed Name: Michael Spillane						Signature: Michael Spillane				Month Day Year: 10/11/98							



Form approved, OMB No. 2050-0039.

HAZARDOUS WASTE MANIFEST1. Generator's US EPA ID No. **TX 120093962** Manifest Document No. **614873**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

Generator's Name and Mailing Address

Bureau of Engraving & Printing
9000 Blue Mound Road
Fort Worth, TX 761314. Generator's Phone (**817 847-3820**)

5. Transporter 1 Company Name

6. US EPA ID Number

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

Spring Grove Resource Recovery
4879 Spring Grove Avenue
Cincinnati, OH 45232

11. US EPA ID Number

11A. US DOT Description (Including Proper Shipping Name, Hazard Class, ID Number and Packing Group)

12. Containers No. Type

13. Total Quantity

14. Unit Wt/Vol

a. **RQ, WASTE CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, CHROMIUM), 8, UN3266, II**

015 DF 07500 P

07500 P

D002 D007

b. **RQ, HAZARDOUS WASTE SOLID, N.O.S. (DEBRIS WITH TRACE CHROMIUM) (D007), 9, NA3077, III**

005 DM 01250 P

01250 P

D007 D008 D009

c. **RQ, HAZARDOUS WASTE SOLID, N.O.S. (DEBRIS WITH TRACE CHROMIUM) (D007), 9, NA3077, III**

010 DF 02500 P

02500 P

D007 D008 D009

d. **RQ, HAZARDOUS WASTE SOLID, N.O.S. (Nickel Hydroxide) (Chromium Hydroxide) 9, NA3077, III**

P

D002 D005 D006

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Waste Listed Above

11a (SL), (C, E), (154)

11b (S), (E), (171)

11c (S), (E), (171)

11d (S), (E), (171)

11e (S), (E), (171) D007, D008, D009, D010, D011, D006

11f CH104929

11g CH104932

11h CH104932

11i CH104832

0031310H

0005319H

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Printed/Typed Name **COLLEEN MCKINNEY**Signature **Colleen McKinney**Month Day Year **04/01/98**

17. Transporter 1 Acknowledgement of Receipt of Materials

Date

Printed/Typed Name **Robert A. Harmon**Signature **Robert A. Harmon**Month Day Year **04/01/98**

18. Transporter 2 Acknowledgement of Receipt of Materials

Date

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Date

Printed/Typed Name **Michael Spillane**Signature **Michael Spillane**Month Day Year **10/11/98**



PLEASE TYPE

(Form designed for use on elite (12-pitch) typewriter.)

EPA Form 8700-22 (Rev. 6-89)

Form Approved. OMB No. 2050-0039, Expires 9-30-96

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest
Document No.

2. Page 1

Information in the shaded areas is not
required by Federal law, but is required by
Illinois law.Generator's Name and Mailing Address
Bureau of Engraving & Printing
9000 Blue Mound Road
Fort Worth, TX 76131

Location If Different

TX 1200939626 111878

4. *24 HOUR EMERGENCY AND SPILL ASSISTANCE NUMBERS 800-645-8265

5. Transporter 1 Company Name

6. US EPA ID Number

Clean Harbors E&W Services Inc. MA0039322250

7. Transporter 2 Company Name

8. US EPA ID Number

Dart Trucking Company Inc.

OHD009865825

9. Designated Facility Name and Site Address

10. US EPA ID Number

Clean Harbors Services Inc
11800 South Stony Island Ave
Chicago, IL 60617

ILD000608471

A. Illinois Manifest Document Number
IL 7311878 FEE PAID
IF APPLICABLEB. Illinois
Generator's ID 9480019999

C. Illinois Transporter's ID 1218

D. 781-849-1700 Transporter's Phone

E. Illinois Transporter's ID 1431

F. (800) 541-8206 Transporter's Phone

G. Illinois
Facility's ID 0316000051

H. Facility's Phone 773 646-6202

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

13.
Total
Quantity14.
Unit
Wt/Vol1.
Waste No.a. RQ WASTE BATTERIES, WET, FILLED WITH ACID, ELECTRIC
STORAGE (D008), 8, UN2794, III

002 DF

00400 P

EPA HW Number
XX002
Authorization Numberb. EPA HW Number
XX
Authorization Numberc. EPA HW Number
XX
Authorization Numberd. EPA HW Number
XX
Authorization Number

Additional Description for Materials Listed Above

11a CH104835 D008 0022309H

K. Handling Codes for Wastes Listed Above
in Item #14

15. Special Handling Instructions and Additional Information

vo# D9106188

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by
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and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and
select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Signature

Date

COLLEEN MCKINNEY

Colleen McKinney

Month Day Year
04 01 98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date

Robert A. Harmon

Robert A. Harmon

Month Day Year
04 01 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date

HOWARD L. DAVIES

Howard L. Davies

Month Day Year
04 23 98

19. Discrepancy Indication Space

2. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Date

ROB SHEAHAN

Rob Sheahan

Month Day Year
05 06 98This Agency is authorized to require, pursuant to Illinois Revised Statute, 1989, Chapter 111 1/2, Section 1004 and 1021, that this information be submitted to the Agency. Failure to provide
this information may result in a civil penalty against the owner or operator not to exceed \$25,000 per day of violation. Falsification of this information may result in a fine up to \$50,000
per day of violation and imprisonment up to 5 years. This form has been approved by the Forms Management Center.

Clean Harbors has appropriate permits for and will accept the waste the generator is shipping.

ORGANIC DEBRIS #1

M626 DS057

38

☐ New ☐ Amendment

GENERATOR INFORMATION

Generator Name Bureau of Engraving & Printing
 Facility Address 9000 Blue Mound Rd
 City/County Ft Worth
 State TX Zip Code 76131
 USEPA ID# * TX1200939626
 State ID# _____

Technical Contact Harold Conert
 Telephone (817) 847-3845 EXT. _____
 Fax () _____
 Billing Name _____
 Billing Address C.E.S.
 City _____ State _____ Zip Code _____
 Attention _____
 Telephone () _____ EXT. _____

B. DOT Shipping Name HAZARDOUS WASTE, SOLID, N.O.S.Hazard Class 9UN/NA No. NA3077 Packing Group III RQ _____C. RCRA RCRA Non Hazardous/Exempt? ☐ Yes ☒ No Process Generating: _____
SPILL CLEAN UPState Waste Codes: _____ EPA Waste Codes: D004 D005 D006 D007
D008 D009 D010 D011

D. ANNUAL REPORT CODES

SIC Code: _____
 Source Code: A _____
 Form Code: B _____
 Origin Code: _____
 System Type: M _____

E. OTHER COMPONENTS

	No	Yes	Total ppm
PCB's	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Cyanides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Sulfides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Pesticides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Phenolics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Dioxins	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Halogens	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____ %

F. PHYSICAL CHARACTERISTICS AT 70° F

1. Infectious or Biological Waste? ☐ Yes ☒ No
 2. NRC Regulated Radioactive? ☐ Yes ☒ No
 3. Reactivity ☒ None ☐ Water Reactive
☐ Pyrophoric ☐ Shock Sensitive
☐ Cyanides ☐ DOT Explosive
☐ Sulfides ☐ Other _____

Weight Density 5-10 lbs./gal. (US, liq) lbs./cu. foot
 Dry Weight ☐ <1.0% ☐ 5-20%
☐ 1-5% ☒ 20-100%

pH ☐ N/A ☒ 4.1-10 ☐ ≥ 12.5
☐ 0-2 ☐ 10.1-12.4 Exact _____

Flash Point (liquid only)
☐ <73°F (23°C) ☐ Boiling Point
☐ 73-140°F (23-60°C) ☐ <95°F (35°C)
☐ 142-200°F (61-93°C) ☐ >95°F (35°C)
☐ >200°F (93°C) ☒ N/A
☐ N/A

BTU/Lb. >5,000Dermal Toxicity LD₅₀ (Mg/Kg)

☐ ≤40 ☐ >200, ≤1000
☐ >40, ≤200 ☒ >1000

4. Material poisonous by inhalation? ☐ Yes ☒ NoOral Toxicity LD₅₀ (Mg/Kg)

☐ ≤5 ☐ >5, ≤50
☐ >50, ≤200 ☒ >200
 Liquids: ☐ >50, ≤500 ☐ >500

Containers (Cylinder) ☒ Solid 100 %
☐ Aerosol ☐ Sludges _____ %
☐ Lab-Pack ☐ Free Liquids _____ %
100 %

Layers ☒ Single Layered ☐ Bi-layered ☐ Multi-layeredViscosity ☐ Low ☐ Medium ☒ HighOdor ☒ None ☐ Mild ☐ Strong Describe: _____Color/Appearance: DEBRIS

H. PHYSICAL/CHEMICAL CONSTITUENTS
 ORGANIC DEBRIS CONSISTING OF PAPER, CARDBOARD, TYEKS, GLOVES, RUBBER, 0-10 %
 PLASTIC, PAINT BRUSHES/ROLLERS, _____ %
 WOOD PIECES, PAINT CHIPS, SPILL _____ %

PIGS, SPONGES, _____ %
 RESPIRATOR CARTRIDGES CONTAMINATED WITH FUELS, OILS, ACID BASES, 0-10 %

WATER, PAINT, GREASE, OTHER _____ %

ABSORBANT, DIRT 0-5 %

_____ %

_____ %

_____ %

_____ %

ONLY CODES THAT APPLY WILL BE _____ %

MANIFESTED _____ %

(Attach All MSDS, Sample Analysis and Additional Info.)

G. METALS

☐ NONE ☐ TCLP (MG/L) ☒ TOTAL (PPM)

	Reg. Limit	Below	Above	Range
Arsenic	5 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<15
Barium	100 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<200
Cadmium	1 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<200
Chromium	5 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<350
Copper		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<10
Lead	5 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<2500
Mercury	0.2 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<3
Nickel	134 mg/L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<10
Selenium	1 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20
Silver	5 mg/L	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<25
Zinc		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<10
Others:				

I. ANTICIPATED VOLUME

Qty.	Container	Qty.	Container
<input type="checkbox"/>	5 gal. pail	<input type="checkbox"/>	Cubic Yard Box*
<input type="checkbox"/>	15 gal. carboy	<input type="checkbox"/>	Super Sack*
<input type="checkbox"/>	30 gal. drum	<input type="checkbox"/>	Roll-off/Dump Trailer
<input type="checkbox"/>	55 gal. drum	<input type="checkbox"/>	Tanker*
<input type="checkbox"/>	85 gal. drum	<input type="checkbox"/>	Other _____

Per ☐ 1 Time ☐ Week ☐ Month
☐ Year ☒ Other 500,000 LB A YR

(*) Is this waste regulated as a Marine Pollutant (49 CFR 171.8)? ☐ Yes ☒ No

Generator's Certification:

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile.

Generator's Authorized Signature: Harold ConertDate 12-1-93



Material Profile

11626 05057

TC Rule Certification/Recertification

CHARACTERISTICS OF HAZARDOUS WASTE: Indicate if this waste contains any of the following characteristics based on criteria mandated by 40 CFR 261.21, 261.22, 261.23, and 261.24.

Approved by _____
 Date Approved _____
 Final Reviewing _____
 Annual Analysis Date _____

Regulatory Threshold Level	(Check One) Yes No	Schedule Data	(Check One) Generator's Knowledge	Actual Value
001 Characteristic of Ignitability	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	110°F
002 Characteristic of Corrosivity	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	3.2 or 12.5
003 Characteristic of Reactivity	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

Regulatory Threshold Level, ppm	(Check One) Yes No	Schedule Data	(Check One) Generator's Knowledge	Actual Value (ppm)
04 Arsenic	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
05 Barium	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	1000
06 Cadmium	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	10
07 Chromium	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
08 Lead	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
09 Mercury	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
10 Selenium	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
11 Silver	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
12 Endrin	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.02
13 Dieldrin	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.02
14 Heptachlor	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	100
15 Toxaphene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
16 DDT	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	100
17 2,4-Dichloro- phenoxyacetic acid	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	10
18 2,4,5-TSNA	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
19 Barium	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
20 Carbon	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
21 Hexachloro- cyclopentadiene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	100
22 Chlorobenzene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	1000
23 Chloroform	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	50
24 1,1,1-Trichloro- ethane	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	500
25 1,1,2-Trichloro- ethane	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	500

Regulatory Threshold Level, ppm	(Check One) Yes No	Schedule Data	(Check One) Generator's Knowledge	Actual Value (ppm)
006 Crystallinity	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	200.0
007 1,4-Dichlorobenzene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	7.5
008 1,2-Dichlorobenzene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
009 1,1-Dichloroethane	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.7
010 2,4-Dichlorobenzene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.15
011 Heptachlor (and its hydrolysis)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.005
012 Hexachlorobenzene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.15
013 Hexachlorocyclopentadiene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
014 Hexachlorocyclopentadiene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	3.0
015 Methyl ethyl ketone	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	300.0
016 Nitrobenzene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	2.0
017 Pentachlorophenol	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	100.0
018 Pyridine	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	5.0
019 Tetrachloroethylene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.7
020 Trichloroethylene	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.5
021 Trichlorophenol	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	400.0
022 Trichlorophenol	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	2.0
023 Vinyl Chloride	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	0.2

As defined by the TCLP (Method 1311), EP Toxicity is no longer applicable.

LISTED HAZARDOUS WASTE: Indicate if this waste also contains any listed hazardous waste codes in 40 CFR 261.21, 261.22 and 261.23 by including the appropriate EPA hazardous waste code(s).

GENERATOR CERTIFICATION

I hereby certify that all information submitted on this form and all attached documents are true and accurate.

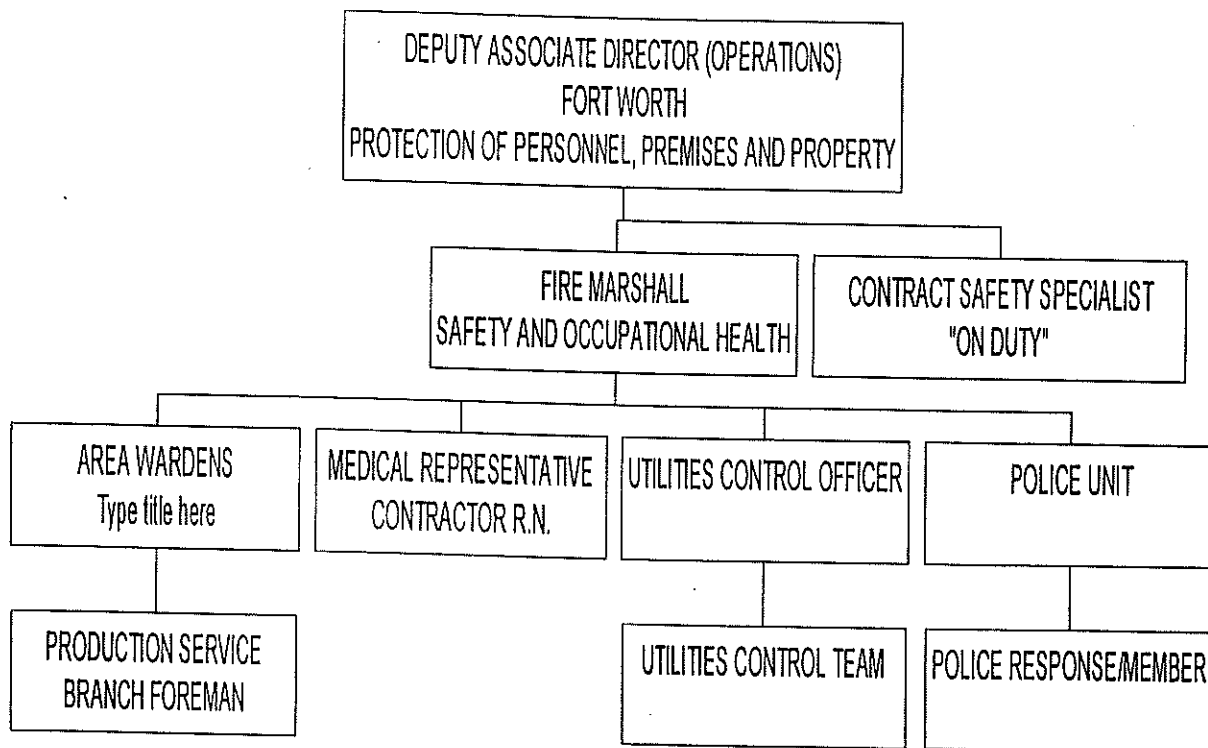
HWASTE CODE	WASTE MATERIAL	TYPE	EPA CODE 1	EPA CODE 2	EPA CODE 3	EPA CODE 4
0002209H	WASTE OIL	H	D001			
0003203H	WASTE SOLVENTS	H	D001			
0004110H	WASTE CAUSTIC	H	D002			
0005319H	ELECTROPLATING SLUDGE	H	D007			
00074073	WASTE PVC	3	NH			
0008003H	LAB PAKS	H	D002			
0009119H	PLATING LIQUID	H	D007			
0010301H	DIRT/OIL CLEANUP	H	D001			
0011309H	WASTE MERCURY DEVICES	H	D009			
0012103H	WASTE NICKEL BATH	H	D007			
0013310H	CARBON FILTERS	H	D001			
00143071	NICKEL SOLIDS	1	NH			
00153101	DRAINED OIL FILTERS	1	NH			
00163101	NON-HAZ SPILL CLEANUP	1	NH			
0017104H	WASTE HCL SOLUTION	H	D002			
0018110H	PRINTING PRESS RINSE(DRUMS)	H	D002			
0019119H	DE-CHROME LIQUID	H	D007	D002		
0020103H	CHROMIC ACID (LIQUID)	H	D007	D002		
0021110H	PRINTING PRESS RINSE(BULK)	H	D002			
0022309H	WET LEAD ACID BATTERY	H	D002	D008		
00233091	DRY ALKALINE BATTERY	1	NH			
0024309H	MERCURY BATTERIES	H	D009			
0025309H	DRY Ni-Cad BATTERIES	H	D006			
0026309H	DRAINED LEAD ACID BATTERY	H	D008			
0027309H	SULFURIC ACID SPILL CLEAN UP	H	D002			
00283101	SPENT RESIN	1	NH			
00292961	ANTIFREEZE	1	NH			
0030307H	LEAD/ANTIMONY ANODES	H	D008			
0031310H	HAZARDOUS DEBRIS	H	D007	D001	D002	
00323081	EMPTY DRUMS (STEEL/PLASTIC)	1	NH			
0033404H	ACTIVATED CARBON	H	D001			
0034001H	WASTE CLEANER(1-1-1 C2CL3)	H	U226			
00353162	SODA ASH - DISCONTINUED	2	NH			

WASTE CODE	WASTE MATERIAL	TYPE	EPA CODE	EPA CODE	EPA CODE
00364032	PVC RESIN - DISCONTINUED	2	NH		
0037388H	FLUORESCENT BULBS - CRUSHED	H	D009		
0038103H	SULFURIC ACID - SCRUBBER CLEAN	H	D007	D002	
0039307H	WASTE SOLID LEAD	H	D008		
00403191	WASTE TREATMENT SOLIDS	1	NH		
00414091	WASTE INK	1	NH		
0042310H	WASTE CARBON CART. - ROLRMAKNG	H	D001		
0043110H	BUCKET WASHER SLUDGE-PUMPABLE	H	D002		

(F)

FIRE, CHEMICAL AND EMERGENCY CONTINGENCY MANUAL

9/26/94



FIRE, CHEMICAL AND EMERGENCY CONTINGENCY MANUAL

WESTERN FACILITY

9/26/94

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CHAPTER 1 - INTRODUCTION

1-1 INTRODUCTION. The Director, Bureau of Engraving and Printing (BEP) has the responsibility for minimizing danger to life and property arising from the effects of fire, explosions, hazardous chemical/waste spills and or disasters affecting the Bureau's employees, products, equipment and buildings. This plan has been developed for the Fort Worth, Texas Western Currency Facility to comply with:

(a) Occupational Safety and Health Standards 29 CFR 1910.38, Employee Emergency Plans and Fire Prevention Plans; and

(b) Environmental Protection Agency Regulations 40 CFR Part 264, Subpart D, Contingency Plan and Emergency Procedures other life or property threatening emergency contingency plans such as bomb threats, riots etc. are addressed by Security Manuals.

1-2 PURPOSE. The purpose of this Emergency Contingency Manual is to:

(a) Establish written policy;

(b) Delineate duties and responsibilities; and

(c) Outline training requirements; and

(d) Comply with the previously specified Federal Regulations

1-3. APPLICABILITY: The responsibility and procedures set forth in this manual apply to all property under the charge and control of the Deputy Associate Director (Operations) Fort Worth, and to all persons in or on such property.

1-4. LOCATION. The facility is in 3 buildings located at 9000 Blue Mound Road, Fort Worth, Texas and include:

(a) intaglio presses;

(b) waste water treatment operations;

(c) vehicle/hazardous material storage;

(d) hazardous waste storage out-buildings;

(e) VOC treatment equipment; and

(f) vault storage and other support activities.

1-5 OCCUPANCY. There are approximately 525 persons occupying the premisses, divided in 3 shifts as follows:

Day Shift - 302 persons
Second Shift - 76 persons
Third Shift - 132 persons

1-6. AMENDMENT OF THE CONTINGENCY MANUAL. The manual must be reviewed and amended immediately when:

- (a) Applicable regulations are revised
- (b) The plan fails in an actual or mock emergency
- (c) The facility changes in design, operations, mission or other circumstance that materially increases the potential for fire, explosion or release of hazardous material/waste or its constituents, or changes in the response necessary in an emergency;
- (d) The list of emergency coordinators changes; or
- (e) The list of emergency equipment changes.

1-7. MANUAL DISTRIBUTION: An updated copy of the Emergency Contingency Manual must be distributed as follows:

- (1) Central Files;
- (2) Environmental Office;
- (3) Security Office;
- (4) Police Operations Command Center;
- (5) Safety and Occupational Health Office;
- (6) The Fort Worth Emergency Management Office;
- (7) Currency Production Office;
- (8) Facility Management Office;

1-8. OFFICE OF PRIMARY RESPONSIBILITY. Safety, Health, Environmental Services and Compliance Staff.

CHAPTER 2 ORGANIZATION

2-1. RESPONSIBILITIES. The establishment of the Emergency Contingency Manual is the joint responsibility of all offices of the Western Currency Facility. The Safety and Occupational Health Office has primary responsibility for developing and maintaining the Manual. Personnel responsible for implementing the Manual will be recruited on an equitable basis from among all offices.

2-2. DESIGNATED OFFICIAL. The Deputy Associate Director (Operations), Fort Worth is responsible for overall policy and approval of an Emergency Contingency Manual for the protection of personnel, premises and property. In the event of a disaster, the Deputy Associate Director (Operations), Fort Worth is responsible for any statements to other government officials or the press. No statements regarding any disaster may be made without his prior approval.

2-3. SUCCESSION to COMMAND. To provide continuity, certain persons are designated to succeed to command should the Deputy Associate Director (Operations), Fort Worth be unable/unavailable to discharge his/her duties and responsibilities during a fire or chemical emergency. The succession to Command is as follows and in the areas identified in figure 1:

Richard Laird, Support Services Manager
Bruce Crouch, Production Manager
Security Manager

2-4. DESIGNATION of OTHER ORGANIZATIONAL PERSONNEL. The Western Currency Facility will provide the personnel to staff the organization as identified in figure 1. The duties and responsibilities of the organizational components are addressed in various areas of this plan.

2-5. BUILDING OCCUPANTS. All employees shall acquaint themselves with the alarm signals and emergency instructions contained in this manual. Each employee is required to respond correctly to alarms and directions by organization personnel during an emergency. Employees must follow the directions of and cooperate with organization personnel.

2-6. BASIC FUNCTIONS. The organization as shown in Figure 2 will perform the following functions:

a. Evacuation of Building Occupants: This function provides for the orderly planned and directed evacuation of building occupants in the event of an emergency. It is performed by the evacuation group under the direction of the Fire Marshal and Area Wardens.

b. First Aid: This function provides for emergency medical treatment by personnel trained in emergency first aid. It is performed by the Health Clinic personnel and any assistance by qualified WCF Police Unit personnel that they deem necessary.

c. Utilities Control: This function provides for control of utilities in the building in the event of an emergency. It includes the control of all electrical and mechanical equipment; water, gas and steam valves and piping; power switches; ventilation and refrigeration devices; and any other such utilities and systems in the building. Production equipment shall be controlled by their operators.

d. Chemical Emergency: This function provides for response to a chemical spill or release of a hazardous material/waste to ensure proper containment, cleanup, disposal, personal protective equipment, property protection, environmental protection and notification of appropriate federal and/or local officials when necessary.

e. Police Officers: This function provides for the security of products and other property during an emergency. WCF Police Officers also assist in the orderly evacuation of personnel. WCF Police Officers may be requested to assist medical personnel.

f. Civil Defense: This function provides for emergency response to hostile, sabotage or natural disaster.

CHAPTER 3 - HAZARDOUS MATERIALS OVERVIEW

3-1 NEW HAZARDOUS MATERIALS.

a. Containerized Material: Hazardous materials in the form of new, raw materials for use in the various production and support operations are delivered to incoming materials storage at room P-175 for interim storage or transported directly to the using activity.

STORAGE AREAS FOR HAZARDOUS MATERIALS ARE:

ROOM #	NOMENCLATURE
P171	WASTE TREATMENT
P127	PRODUCTION SHOP
P120	PLATE MAKING
P100A	CYLINDER CART STORAGE
P100	PRESS ROOM
P101	C.O.P.
P155	INK STORAGE
S146	CHEMICAL DILUTION
S136	CORROSIVE CHEMICAL STORAGE
S150	WASTE TREATMENT TANKS ROOM
S147	LABORATORY
S151	ACID AREA
S148	CENTRIFUGE ROOM
S112	INK MILL ROOM

In general, the hazardous materials consist of flammable and combustible liquids. Additionally, storage of new hazardous materials in these areas consist of compressed flammable gases, caustics in 55 gallon drums, and acids in smaller packages.

a. Bulk Storage Tanks: Hazardous materials in the form of new raw materials in bulk quantities are stored in above and underground locations. Bulk hazardous materials are pumped via piping to production areas or dispensed into portable containers.

3-2 HAZARDOUS WASTE MATERIALS:

a. General Management Procedures: Hazardous wastes are generated in almost all production areas. In general, hazardous wastes are to be handled in the same manner as new hazardous materials. The labeling requirements that must be followed for compliance with EPA regulations is where the difference is identified.

The area supervisor, for preparing hazardous waste for transfer, must complete and attach BEP Form 2428, Hazardous Waste Accumulation Record, to the waste container.

When an area has containers ready for disposal, the supervisor requests transport of the material to the designated storage area. The Western Currency Facility has assigned the Hazardous Waste Coordination function to the Chemical Engineer. After the containers are deposited in the Hazardous Material Storage Sheds, the Hazardous Waste Coordinator has the responsibility to ensure that the Western Currency Facility complies with all Federal, State, local and BEP regulations and directives. After the drums are in the Hazardous Material Storage Buildings the coordinator will confirm container labeling and arrange for disposal, ensuring proper manifesting and transport to an authorized disposal site.

3-3. INVENTORY of HAZARDOUS MATERIALS. The Safety and Occupational Health Office must maintain a complete update inventory of the hazardous materials, by location, in the Western Currency Facility. This inventory provides immediate data on the materials stored and used in the areas, maximum quantity and health, flammability and reactivity hazards relative to the material. The Police Operations Command Center located in the Hardened Command Center will maintain a duplicate copy of the inventory for Fire Department use. Each work center will maintain a copy of the Material Safety Data Sheets (MSDS) for the material in use in the area.

3-4. PERSONNEL TRAINING. Training for personnel handling Hazardous Material will be given by the Safety and Occupational Health Office or by contracted personnel. Production services personnel, who are primary movers of hazardous waste and spilled chemical materials will receive specialized training by a nationally recognized training source.

CHAPTER 4 FIRE PROTECTION AND

EMERGENCY EVACUATION PLAN

4-1. FIRE PREVENTION. In a facility like the Western Currency Facility that stores, processes and uses combustible and flammable liquids in copious quantities and other hazardous material, fire prevention is necessary. To prevent fires from occurring and, in the event of a fire, to decrease the danger and damage, each employee must follow these rules:

- a. Maintain good housekeeping practices at all times.
- b. Identify and correct any apparent fire safety hazard.
- c. Smoke only in designated areas.
- d. Do not throw matches, cigars, cigarettes or pipe ashes into waste baskets or on floors.
- e. Store oily rags or similar flammable materials in containers approved and supplied for that purpose.
- f. Do not use hot plates, irons, or similar heat producing devices unless such devices are authorized by the Safety and Occupational Health Office and installed and maintained in accordance with fire codes.
- g. Maintain exits and passageways clear to permit free movement of personnel and firefighting efforts.
- h. Store all flammable liquids in approved containers.
- i. Maintain only one 24 hour supply of flammable materials in work area, not to exceed 15 gallons per piece of equipment.
- j. Use only U.L. listed, rotary type dispensing pumps, in transferring flammable liquids.
- k. Clean up all spills and dispose of waste as prescribed.
- l. Do not tamper with portable fire extinguishers.
- m. Keep all potential ignition sources away from flammables and combustibles.

4-2. FIRE PROTECTION EQUIPMENT and SYSTEM

- a. Command Center.

1. The Police Operations Command Center in conjunction with the Facilities Management Center shall serve as the Command Center for emergency operations and the Facilities Management Center maintains the Facilities Management System which has the following features:

- (a) Fire alarm initiating device zone locator.
- (b) Fire alarm initiating device description.
- (c) Recorder
- (d) Alarm transmitter.
- (e) Monitoring of fire suppression systems.
- (f) Supervises fire systems circuits.

2. The Police Operations Command Center maintains the ring down phone system to all emergency response forces.

b. Communications. In the event of a fire, Police personnel and other responding personnel dispatched must be assigned a portable radio for communications back to the Police Operations Command Center who in turn will relay all information to the Facility Management Center. Other communications will be via internal telephone system.

EXCEPTION: Radios will not be used during a bomb threat or suspected bomb threat.

c. Fire Alarm System. Upon activation of any initiation device the FMS transmits the following audio alarm signals:

- 1. A ten-second alert tone to the entire building.
- 2. After the ten-second alert tone, transmit a pre-recorded emergency announcement continuously until manually stopped. If the emergency message fails the alert tone will continue. Two messages will be transmitted:
 - (a) Alarm zone - Both strobe light and evacuation instructions are activated advising personnel of emergency condition and to evacuate via the nearest exit.
 - (b) All other building areas - No Strobe Light is activated and advises personnel to remain and await further instructions.

Additionally, the system may be interrupted with live emergency communications.

4-3. DUTIES and RESPONSIBILITIES

a. The Deputy Associate Director (Operations), Fort Worth of the Western Currency Facility is responsible for overall policy and approval of an Emergency Contingency Plan for the protection of personnel, premises and property.

b. Fire Marshall (Safety and Occupational Health Specialist). The Fire Marshal's duties are:

1. Ensure proper dissemination of the Emergency Contingency Plan.

2. Coordinate with Facilities Management, as necessary, for fire systems maintenance and improvements.

3. Ensure that the roster for organization personnel involved in emergency operations is maintained and posted.

4. Ensures that all necessary actions are taken to maintain safe and efficient operations in an emergency.

5. Ensures orderly movement of all personnel in the facility during the emergency.

6. Maintains liaison with local authorities.

7. Insure that appropriate training courses are conducted, using local organizations as are available.

8. With the approval and cooperation of the Facilities Manager, coordinates and arranges for and directs civil defense, fire and evacuation drills.

9. Works closely with and cooperates with local and state civil defense personnel in matters pertaining to facility plans, organization and operation.

10. Plans personnel movement routes and establishes procedures.

11. Assures that all personnel responsible for occupant evacuation perform their duties and responsibilities.

12. Supervises and directs movement of personnel, during drills and actual emergencies, inside and outside of the building.

13. Reports to scene of emergency to assess situation and evaluate evacuation needs.

c. Area Wardens. Under the direction of the Fire Marshall, the Area Wardens expedite the evacuation of personnel in their area. The Area Wardens duties include:

1. Assures that evacuation routes are identified, clear, posted and known by the regular occupants.

2. Directs the orderly flow of personnel along the prescribed routes.

3. Immediately establishes the alternate route if the normal route is blocked by the emergency.

4. Appoints a column leader to lead personnel along the evacuation route.

5. Assures the area has been evacuated prior to their departure.

6. Maintains a listing of handicapped personnel in their area. The list will include:

(a) Name

(b) Room number

(c) Any evacuation device, assistance needed and the location of the device.

7. Reports to the Police Operations Command Center after evacuation and role has been taken. Reports include, area, number of personnel in area and number at role.

d. Medical Representative. Serves as the coordinator for first-aid services. They are responsible for all personnel assigned to perform first-aid in an emergency and supervising those operations. Their duties include:

1. Selection of a first-aid or medical treatment staging area during an emergency that involves a number of injuries.

2. Directs first-aid operations and controls access to medical supplies, as required, to assure proper use, conservation and availability.

3. Maintains liaison with the local hospital to coordinate any emergency services required.

e. Utilities Officer. Responsible for controlling building utilities other than production equipment, such as presses, coilers, computers, etc., during an emergency. Production equipment shall be controlled by the respective operators. The Utilities Officer performs the following duties:

1. Establishes a plan to attend utilities during an emergency. Identifying which utilities are necessary for operations and which should be secured from operations.

2. Dispatches individuals or teams, at the sound of emergency alarms, to prearranged control points to perform a preplanned or directed action.

f. WCF Police Unit. Their duties include:

1. Dispatch police response team to investigate reported emergency.

2. Ensure roster officials to be contacted in the event of an emergency are notified of the nature and location.

3. Assign police officers to exterior exits to perform

the necessary security checks required in the event of evacuation.

4. In the event a total building evacuation becomes necessary, they shall man the Secondary Command Center, located in the Main Gate Office.

g. Police Response Member/Team. Their duties include:

1. Investigate all alarms or reports.
2. Report to Shift Commander findings.
3. Secure area and assist as necessary.

4-4. FIRE PROCEDURES

a. Unconfirmed Fire. Upon seeing or smelling smoke from an unidentified source, the following actions shall be taken by an employee:

1. Notify supervisor.
2. The supervisor or employee shall telephone the Command Center.
3. The Police Watch Commander will dispatch the Police Response Team to the area. They shall conduct a thorough and rapid search of the area and report via radio, the findings of the search.
4. The Police Watch Commander shall also ensure the personnel on the roster of officials to be contacted in the event of an Unconfirmed Emergency are contacted via the Police/Management intercom system immediately.
5. If the fire is confirmed, the actions outlined in 4.b., for a confirmed fire, shall be followed. If the fire is NOT confirmed all personnel will assume their normal routine.

Upon receipt of an unconfirmed fire alarm signal from any other source the FMS/Police shall take the actions described in 4-4.a.(3) through (5) shall be followed.

b. Confirmed Fire. Upon an employee discovering a fire and no alarm has been transmitted via the fire system the following actions shall be taken:

1. The supervisor or employee shall notify the Command Center.
2. The operator of any equipment affected shall, if safe to do so, shut it down.
3. Employees in the area may commence fire fighting actions using portable extinguishers, if properly trained in

their use and if the fire is in the beginning stages only.

4. The supervisor or employee shall pull a manual fire alarm station and telephone the Command Center.

5. They shall provide the following information:

- (a) Location of fire.
- (b) Type of fire; paper, flammable, electrical or burning metals.
- (c) Extent of fire involvement

6. The Police Watch Commander will ensure that all personnel on the Roster of Officials to be contacted in the event of an emergency are notified. They should relay the same information to those personnel as received from the Police Response Team.

7. The Police Response Team and Fire Marshall shall determine if outside assistance is required and notify the Police Watch Commander.

8. If notified that outside assistance is required the Police Watch Commander or Officer-In-Charge shall activate the transmit signal to the Fort Worth Fire Department.

c. When outside assistance is obtained the Police Watch Commander or Officer-In-Charge shall dispatch an officer to direct the Fire Department to the nearest point of entry to the fire.

d. The Fire Marshal shall meet the Fire Department and provide the following:

- 1. Exact location of fire.
- 2. Type of fire.
- 3. Extent of Building involvement.
- 4. Building is totally evacuated or location of personnel remaining and any unaccounted for personnel.

4-5. EVACUATION PLAN

a. The Security Manager serves as the control point in the event an emergency results in the need for evacuation of personnel. Under his/her direction the Fire Marshal develops evacuation plans and implements these plans during the emergency with the assistance of the WCF Police Unit Personnel.

b. When to Evacuate. The evacuation plan contained herein shall be implemented when a fire or other emergency is confirmed

and outside assistance is called to handle the emergency. At this time, it is probable that personnel directly in danger have already evacuated. The supervisor in the immediate area, or personnel working in the area, if no supervisor is present, shall evacuate the area affected, when it has been determined that the emergency is beyond control and the situation is life threatening. Chemical emergencies (release or spills) will be handled on a case by case basis. Evacuation for a chemical emergency will take place only when there is a threat to life due to its health, fire or reactivity hazard.

c. Emergency Organization Response. The Emergency Organization Personnel shall respond when the fire alarm system has been activated or when otherwise notified. They shall assume their responsibilities as outline in this plan.

d. Emergency Evacuation Route Diagrams. These are posted in various areas throughout the facility and show the location of primary and secondary exits from each area. Emergency gathering areas are identified in Appendix A of this plan.

e. Facility Evacuation Plan.

(1) The extent of evacuation will depend on the location, extent and potential of the emergency.

(2) Upon notification of the necessity for evacuation it is important that procedures be known in advance. Delays caused by unsurity could cause injury or death which might be avoided if personnel were prepared in advance.

(3) The Fire Marshall under the direction of the General Manager will decide when evacuation orders will be given. The Area Wardens may decide to evacuate their area if the emergency is sufficient and no evacuation order has been given.

(4) Each Area Warden will upon notification to evacuate instruct personnel to the nearest route. These routes will be in accordance with the posted routes.

(5) Upon evacuation each Area Warden will report to the Police Operations Command Center that their area is clear, a roster has been taken and any deficiencies in the roster.

(6) Prior to evacuation personnel shall take the following action whenever possible unless such action would endanger their lives:

(a) Place exposed records in cabinets or desks drawers or place covers over the records to protect them against damage.

(b) Place classified documents in safes and secure their location.

(c) Disconnect electrical equipment.

(d) Shut down all equipment such as presses, computers, coilers, etc.

(e) Close, but DO NOT LOCK, the door when the last person leaves the room.

f. Evacuation of Handicapped Personnel. Handicapped personnel unable to evacuate without assistance will be escorted by one or more persons assigned to that duty in writing by the supervisor of the area.

4-6. TRAINING.

a. General. A continuing program of training and education for all personnel is imperative to ensure maximum effectiveness. Personnel assigned duties and responsibilities require and shall receive specific training in the skills required to perform their duties, e.g., first-aid, firefighting, etc. The Safety and Occupational Health Office is responsible for identifying the needs and for bringing those needs to the attention of the proper agency official.

b. Drills. Drills familiarize personnel with the actions required during an emergency. Evacuation drills will be conducted periodically under the direction of the Safety and Occupational Health Specialist. Drills maybe announced periodically and evacuation drill using alternate evacuation routes by simulating blocked normal exits will be conducted.

4-7. REPORTING PROCEDURES. All fires must be reported to the Safety and Occupational Health Office and the Police Operations Command Center.

a. Police Services Section Fire Report. BEP Form 1241 will be completed by one of the Police Officers responding to the fire. A copy will be forwarded to the Safety and Occupational Health Office.

b. Safety and Occupational Health Office Fire Report. Any fire resulting in personal injury, death, or property damage in excess of \$500.00 will be investigated. A report shall be prepared giving recommendations to prevent similar incidents. The report shall be distributed to the Supervisor of the Office that was involved and to the Deputy Associate Director (Operations) , Western Currency Facility.

CHAPTER 5

CHEMICAL EMERGENCY RESPONSE

5-1. DUTIES and RESPONSIBILITIES.

a. The ~~Deputy Associate Director (Operations)~~ ^{Plant Manager} is responsible for ensuring that facilities are maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste to air, soil, or surface water which could threaten human health or the environment.

b. Safety and Occupational Health Specialist.

(1) Ensures that the basic provisions of this manual are disseminated to all person employed in the facility.

(2) Ensures that appropriate personnel are trained to provide technical guidance for safely dealing with chemical emergencies.

(3) Develops or provides an Emergency Spill Control Guide for dissemination to Chemical Emergency Response Team (CERT) members.

(4) Maintains liaison with state and local emergency response teams to plan for emergency services in the event of a chemical disaster.

(5) In the event of human health or environment threatening disasters within the Western Currency Facility, reports to the General Manager the potential extent of injuries and hazards to human health or the environment outside the facility.

(6) Assist the Chemical Emergency Coordinator (CEC) with the technical supervision of incidents involving releases of flammable hazardous materials.

(7) Serves as the Personnel Movement Officer in the event that evacuation is necessary.

(8) Serves as the assistant CEC, providing technical expertise in situations where chemical releases may have possible hazards to human health.

(9) Tests for airborne concentrations of the chemical contaminant.

(10) Recommends the appropriate personal protective equipment required for use by personnel during emergency response operations.

(11) Provides chemical toxicity information to the Clinic when first-aid or emergency treatment of personnel is required.

(12) Insures that any personnel exposures to hazardous substances in excess of Federal limits are documented.

c. Chemical Emergency Response Team (CERT).

(1) Chemical Emergency Coordinator (CEC). A CEC will be available or on call twenty-four hours per day. The CEC will be appointed in writing and a listing will be distributed to holders of this manual. The responsibilities of the CEC are:

(a) Reports to the site to assume technical supervision of the control and cleanup of the accidental spill or release of hazardous materials and to contact other members of the Spill Control Team as required.

(b) Monitors and is familiar with all aspects of this Emergency Contingency Manual, all operations and activities of the facility, the location and characteristics of waste chemicals handled, and the facility layout.

(c) Maintains all records required by this manual.

(d) During an actual emergency, the CEC should take all reasonable measures necessary to ensure that chemical releases do not spread or recur in other areas of the facility.

(e) Immediately following the emergency, the CEC will provide for the treatment, storage and disposal of any recovered materials, including contaminated soil or surface water, and other waste materials generated from a fire, explosion or chemical release.

(f) Ensures that all emergency equipment utilized during a chemical emergency is cleaned and restored to its original condition prior to the resumption of normal conditions. This will include replenishing any supplies that may have been used from the emergency "SPILL KARTS".

(g) If any or all parts of this plan fail, the CEC should evaluate why the plan was ineffective, and provide a corrective written addendum to be a permanent part of the Emergency Contingency Manual.

d. Medical Clinic Staff (MCS). The Medical Clinic Staff is responsible for training and equipping all personnel assigned to perform medical or first-aid services in an emergency, and for supervising emergency first-aid or medical self-help operations within the building during an emergency. MCS duties include:

(1) Selects a first-aid or medical treatment staging area during an emergency that involves a number of injuries.

(2) Directs first-aid operations and controls access to medical supplies, as required to assure their proper use, conservation, and availability for emergency use.

(3) Ensures personal protective equipment is provided for Clinic Staff.

(4) Maintains liaison with Fort Worth area hospital emergency rooms and ambulance/flight transportation to coordinate emergency services as required.

Chief Station by
e. ~~Utilities Officer.~~ The Utilities Officer is responsible for controlling building utilities during an emergency. Production equipment such as presses, coilers, computers and other production equipment shall be controlled by the respective operators. The Utilities Officer serves as head of the utilities control group and performs the following duties:

(1) Establishes a plan to attend mechanical devices; ventilation, water, gas, and steam valves; power switches; etc. during an emergency.

(2) Dispatches individuals or teams, at the sound of emergency alarms, to prearranged control points for preplanned or directed action.

Building Operation and Maintenance Cont
f. ~~Utilities Control Team.~~ Under the direction of the ~~Utilities Officer~~, the Utilities Control Team is responsible for controlling utilities during an emergency. During emergencies they report to the Utilities Officer in the predesignated location.

g. Facilities Police. Police personnel maintain immediate security during the cleanup and maintain the communication link with the Command Center for coordination of outside emergency services as required.

h. Contract Safety Specialist. During the evening and midnight shifts, or when a contract specialist is working, they will respond to the initial notification of a chemical release. If the release is of a minimal/no hazard chemical, as outlined in paragraph 3 of this section, the Safety Specialist will supervise the clean-up operation. If the release is of a higher magnitude, the Safety Specialist will notify the Command Center to implement this manual.

i. Production Service Branch Foreman. Ensures that the clean-up crew is equipped with personal protective clothing, supplies and equipment necessary to confine and clean up the spill or other waste materials prior to the resumption of normal operation.

5-2. CHEMICAL SPILL/RELEASE EMERGENCY PROCEDURES and
CLASSIFICATION of SPILLS.

a. Classification of Spills/Releases

(1) Non-emergency Spills/Releases. Any spill/release of a relatively small quantity, where the chemical poses minimal or no hazard to human health or the environment is considered to be a spill/release of the non-emergency type.

(2) Emergency Spills/Releases. Any spill/release of major proportion, that is, a large volume (a 55 gallon drum or greater) or one involving a potentially life or environment threatening chemical reaction is considered to be an emergency spill/release.

b. Reporting Procedures.

(1) Employee's Responsibility.

(a) Any employee who discovers or is involved in a spill of a chemical will immediately report the spill to the supervisor of the area in which the spill has occurred.

(b) If there is no supervisor present or if the incident occurs in a public area, the employee will assume the supervisor's responsibility.

(c) If a materials handling vehicle is involved, the employee will also immediately report to the Supply Section supervisor.

(2) Supervisor's Responsibility.

(a) Upon receipt of a report of a chemical spill in his/her area, the supervisor will obtain the following information.

1. The amount of the spill, i.e., quart, 5 gallon pail, 55 gallon drum.

2. The name of the substance, if possible. This may be obtained, in some instances, from the container markings.

3. The location of the spill.

(b) After assessing the spill, the supervisor will decide if it is classified as an emergency or non-emergency spill, as identified previously. If the spill does not constitute an emergency, the supervisor shall contact the Chemical Emergency Response Team Coordinator to have the spill cleaned up in accordance with this manual.

(c) If the Supervisor assesses the spill as an

emergency, the Supervisor must contact the Safety Specialist on duty. If the Safety Specialist cannot be reached the supervisor shall contact the Police Operations Command Center and inform him/her of the details of the emergency and request they contact the officials on the Roster of Officials to Be Contacted in the Event of an Unconfirmed Emergency.

(3) Safety and Occupational Health Specialist Responsibility: In the absence of the CEC, assumes the responsibilities of the CEC.

(4) Police Operations Responsibility: Contact emergency notification roster officials as instructed by the CEC or the Safety and Occupational Health Specialist, as applicable.

(5) Chemical Emergency Coordinator's (CEC) Responsibility:

(a) Shall contact the Senior Police Watch Commander to have the clean up crew respond.

(b) Assess the spill and notify the Police Operations Command Center to contact the appropriate officials on the appropriate roster.

-c. Emergency Procedures.

(1) Whenever there is an imminent or actual emergency situation, the CEC must immediately:

(a) Activate internal communications systems, to notify all facility personnel;

(b) Notify the Police Operations Command Center to initiate emergency procedures; and

(c) Inform the Police Operations Command Center if appropriate state or local agencies with designated response roles must be called for assistance.

(2) Whenever there is a release, the CEC must immediately identify the character, source and amount of any released materials. He/she may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

(3) Concurrently, the CEC must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion.

(4) If the CEC determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment outside the facility, he/she must report the findings as follows:

(a) If the findings indicate that evacuation of local areas may be advisable, immediately notify appropriate local authorities. Remain available to help appropriate officials decide whether local areas should be evacuated; and

(b) Immediately notify the National Response Center using the 24-hour toll free number (800) 424-8802. The report must include:

- (1) Name and telephone number of reporter;
- (2) Name and address of facility;
- (3) Time and type of incident (e.g., release, fire);
- (4) Name and quantity of material involved, to the extent known;
- (5) The extent of injuries, if any; and
- (6) The possible hazards to human health or the environment outside the facility.

(c) During an emergency, the CEC must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous materials at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released material and removing or isolating containers.

(d) If the facility stops operations in response to a fire, explosion or release, the CEC must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(e) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(f) The CEC must ensure that, in the affected area(s) of the Facility:

- (1) No waste that may be incompatible with the released material is treated, stored or disposed of until cleanup procedures are completed; and

- (2) All emergency equipment listed in the contingency manual is cleaned and fit for its intended use before operations are resumed.

- (3) The CEC must notify the EPA Regional

Administrator and appropriate State and local authorities, that the facility is in compliance with the applicable sections of this manual before operations are resumed in the affected area(s) of the facility.

(g) The CEC must note in the operating record the time, date, and details of any incident that requires implementing the contingency manual. Within 15 days after the incident, a written report on the incident must be submitted to the EPA Regional Administrator. The report must be recorded on Forms 2553 "Chemical Emergency Chronological Log" and 2554 "Spiller's Report" and must include:

- (1) Name, address and telephone number of the Facility Manager;
- (2) Name, address and telephone number of the facility;
- (3) Date, time, and type of incident (e.g. fire, explosion);
- (4) Name and quantity of material(s) involved;
- (5) The extent of injuries, if any;
- (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- (7) Estimated quantity and disposition of recovered material that resulted from the incident.

(h) The CEC should ensure that the "Spiller's Report" is completed and included in the incident documents.

d. Non Emergency Procedures.

1. In the event of a spill of only slightly hazardous chemicals which occur while work is being performed (i.e. in production areas, laboratories, etc.) responsible individuals should attempt to minimize or control further spillage. This may be accomplished by:

(a) Rotating a drum or container in such a way that it no longer leaks.

(b) Placing a small bottle or container which is leaking or spilled in an upright position (or in a position that it no longer leaks), or, placing a small container in a plastic bag or secondary container.

(c) An attempt should be made to limit the extent of the spill by using available spill control pillows to build a dike or wall. The CEC should be notified of the spill, and procedures taken to dispose of the clean up materials properly.

2. The recommended procedures for spill clean up are as indicated below:

(a) Place the spill control pillows around the spill from the outer perimeter of the spill. As the spill is absorbed, move the pillows inward to collect the spill until it is totally absorbed by the spill control pillows.

(b) If the chemical involved is a flammable liquid, keep any sources of ignition out of the immediate area.

(c) After all clean up procedures are completed, all personal protective equipment must also be cleaned or disposed of as appropriate. Reusable equipment must be returned to the "Spill Kart". Return the "Spill Kart" to its designated location and commence replacement of materials used in the clean up.

(d) All contaminated waste materials used to clean up the spill must be containerized, labeled and properly disposed of as hazardous waste.